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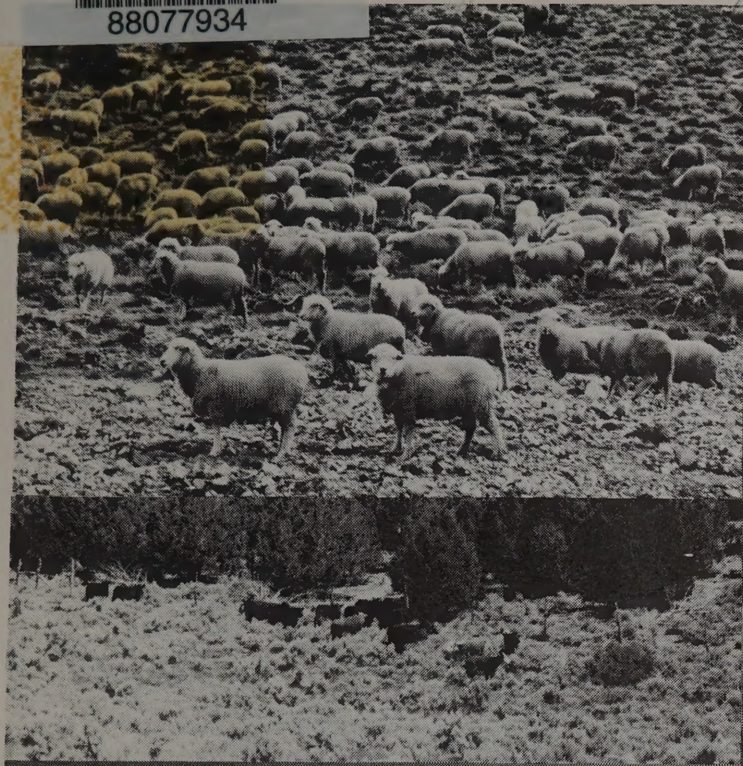
# FINAL
# ENVIRONMENTAL IMPACT STATEMENT AND PROPOSED RESOURCE MANAGEMENT PLAN FOR THE HOUSE RANGE RESOURCE AREA

~~AUGUST, 1986~~ SEPT, 1986

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT



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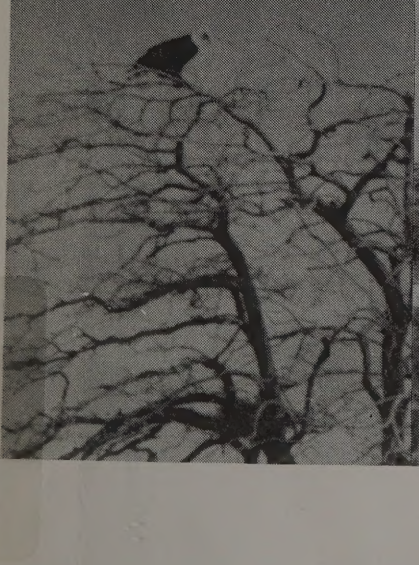

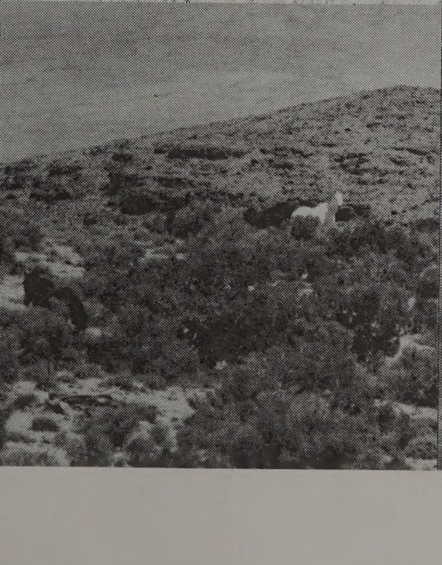

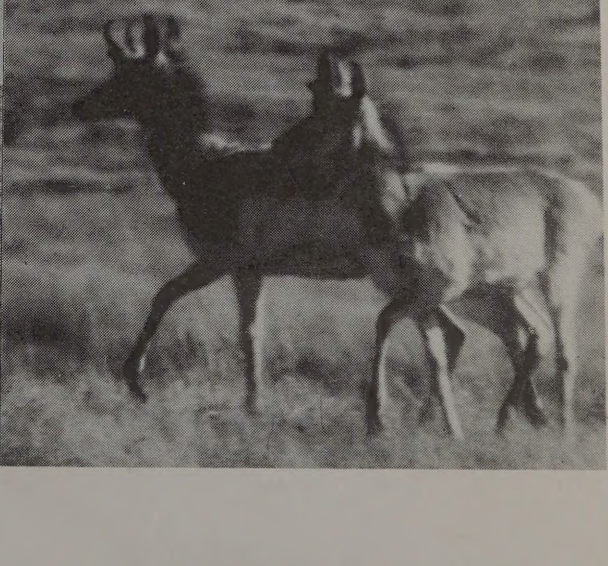

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
RICHFIELD DISTRICT OFFICE
150 EAST 900 NORTH
RICHFIELD, UTAH 84701

IN REPLY
REFER TO:
1792

Dear Reader:

Enclosed for your review is the abbreviated Final Environmental Impact Statement (EIS) for the House Range Resource Area Resource Management Plan. This Final EIS contains the proposed resource management plan, hereinafter referred to as the Proposed Plan. The Proposed Plan is a refinement of the Preferred Alternative presented in the Draft EIS published in March 1986. The Proposed Plan is the BLM's proposed action.

All parts of this Proposed Plan may be protested. Protests should be sent to the BLM Director, Bureau of Land Management, 18th and C Streets, NW, Washington, D.C. 20240, prior to October 30, 1986, and should include the following information:

- The name, mailing address, telephone number, and interest of the person filing the protest.
- A statement of the issue or issues being protested.
- A statement of the part or parts being protested.
- A copy of all documents addressing the issue or issues that were submitted during the planning process by the protesting party or an indication of the date the issues were discussed for the record.
- A short concise statement explaining why the BLM State Director's proposed decision is in error.

No sooner than the end of the 30-day protest period and after the Governor's Consistency Review, a Record of Decision will be issued. Approval shall be withheld on any portion of the plan under protest until final action has been completed on such protest.

Sincerely,

Donald L. Pendleton

Donald L. Pendleton
District Manager

Enclosure:
Final EIS

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# FINAL
# ENVIRONMENTAL IMPACT STATEMENT AND PROPOSED RESOURCE MANAGEMENT PLAN FOR THE HOUSE RANGE RESOURCE AREA

Prepared by

**DEPARTMENT OF THE INTERIOR**
U.S. **BUREAU OF LAND MANAGEMENT**
**RICHFIELD DISTRICT**

September 1986

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**District Manager**
**Richfield District**

Roland Robison
**State Director**
**Utah State Office**

# HOUSE RANGE RESOURCE AREA
# PROPOSED RESOURCE MANAGEMENT PLAN AND FINAL ENVIRONMENTAL IMPACT STATEMENT

( ) Draft Environmental Statement (X) Final Environmental Statement

Department of the Interior, Bureau of Land Management

Type of Action: (X) Administrative ( ) Legislative

Abstract: This proposed Resource Management Plan and short-form Final Environmental Impact Statement presents the outline for managing the public lands in the House Range Resource Area. The plan proposes levels of grazing for livestock, wildlife, and wild horses and provide overall management prescriptions to guide the multiple-use management of all resources. Future recreation and land designations and classifications are also recommended.

Comments: Comments on this document are requested from all interested and/or affected agencies, organizations, and individuals. Comments must be received by October 20, 1986.

For Further Information contact:

Alan Partridge
Bureau of Land Management
150 East 900 North
Richfield, UT 84701
Telephone: (801) 896-8221

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THE SETTING

VEGETATION AND RANGE

WILDLIFE

WILD HORSES

RECREATION

LANDS

MINERALS

SOIL/WATER/WATERSHED

FOREST RESOURCES

FIRE MANAGEMENT

Bleeding tabs are provided in Chapter 2 to eparate the resources listed above. This vill assist the reader in locating the resource escriptions and the proposed actions.)

# SUMMARY

## INTRODUCTION

The Final House Range Resource Area (HRRA) Resource Management Plan/Environmental Impact Statement (RMP/EIS) contains the proposed plan for the management of the public lands and resources in the HRRA of the Richfield District in west-central Utah (Figure 1). The lands affected are found in Juab and northern Millard counties (Figure 2). Approximately 2,245,000 acres of public lands are within the resource area, ranging in elevation from 4,000 to 12,000 feet. Major vegetation includes a vast component of salt desert shrubs, sagebrush, pinyon-juniper woodlands, and native/seeded grasslands. Subalpine types are found in the higher elevations.

The vegetation data in this EIS have been used to help determine areas suitable for continued livestock grazing and to provide the basis for developing a rangeland management program and management alternatives (see Appendix 1). While these data are adequate for purposes of planning and analysis, they must be supported by the results of monitoring studies before making forage allocation decisions.

This Final RMP/EIS uses an abbreviated short-form format.

## THE PLANNING PROCESS

### Planning Issues

The RMP/EIS addresses the management of all Bureau of Land Management (BLM) administered lands and resources within the HRRA. However, primary focus is on the resolution of issues which have been identified through the public participation process. Two planning issues have been identified and analyzed: forage allocation and off-road vehicle (ORV) use.

### Forage Allocation

Proper forage allocations have not been made for all grazing areas, and improper grazing use in some allotments has resulted in forage competition between livestock, wild horses, and wildlife. Grazing animals are an important part of the rangeland environment and provide economic returns to the local communities in terms of employment and recreation.

Land treatments and developments are needed to improve forage for grazing animals and to enhance watersheds and wildlife habitat. These treatments and developments alter the natural visual appearance and may have an adverse impact on ecological relationships.

### ORV Use

ORV use areas need to be identified with special attention given to the resulting impacts to other resources and resource users (i.e., livestock harassment, wildlife fawning areas, etc.). Lack of adequate surface protection and law enforcement can result in uncontrolled abuse of other valuable resources.

Future growth will necessitate the need for additional recreation areas and facilities. Overuse of existing facilities can impair the aesthetics and function of the sites and degrade the surrounding resource values.

These two issues, as well as management concerns dealing with all resource management programs, are analyzed in this RMP/EIS.

## DRAFT RMP/EIS ALTERNATIVES CONSIDERED

Four alternatives were considered in detail in the Draft EIS. Within each alternative, a complete RMP, covering both issue and non-issue associated items, was analyzed. Each plan resolved conflicts in a different manner. The four alternative plans analyzed are briefly described below.

### Alternative A: No Action

The No Action Alternative addresses the continuation of existing management practices at current levels and intensities. No management actions or changes designed to resolve planning issues are proposed under this alternative.

### Alternative B

This alternative resolves any significant conflicts with livestock grazing in favor of the non-livestock resources. This type of conflict resolution allows benefits to accrue mostly to wildlife, wild horses, and watershed values. Livestock grazing would be curtailed and/or eliminated on some allotments to allow other uses and initial forage allocation would decrease. Land disposals would be limited to those areas identified for such use, and major transportation/utility corridors would be formally designated. Nine areas would be

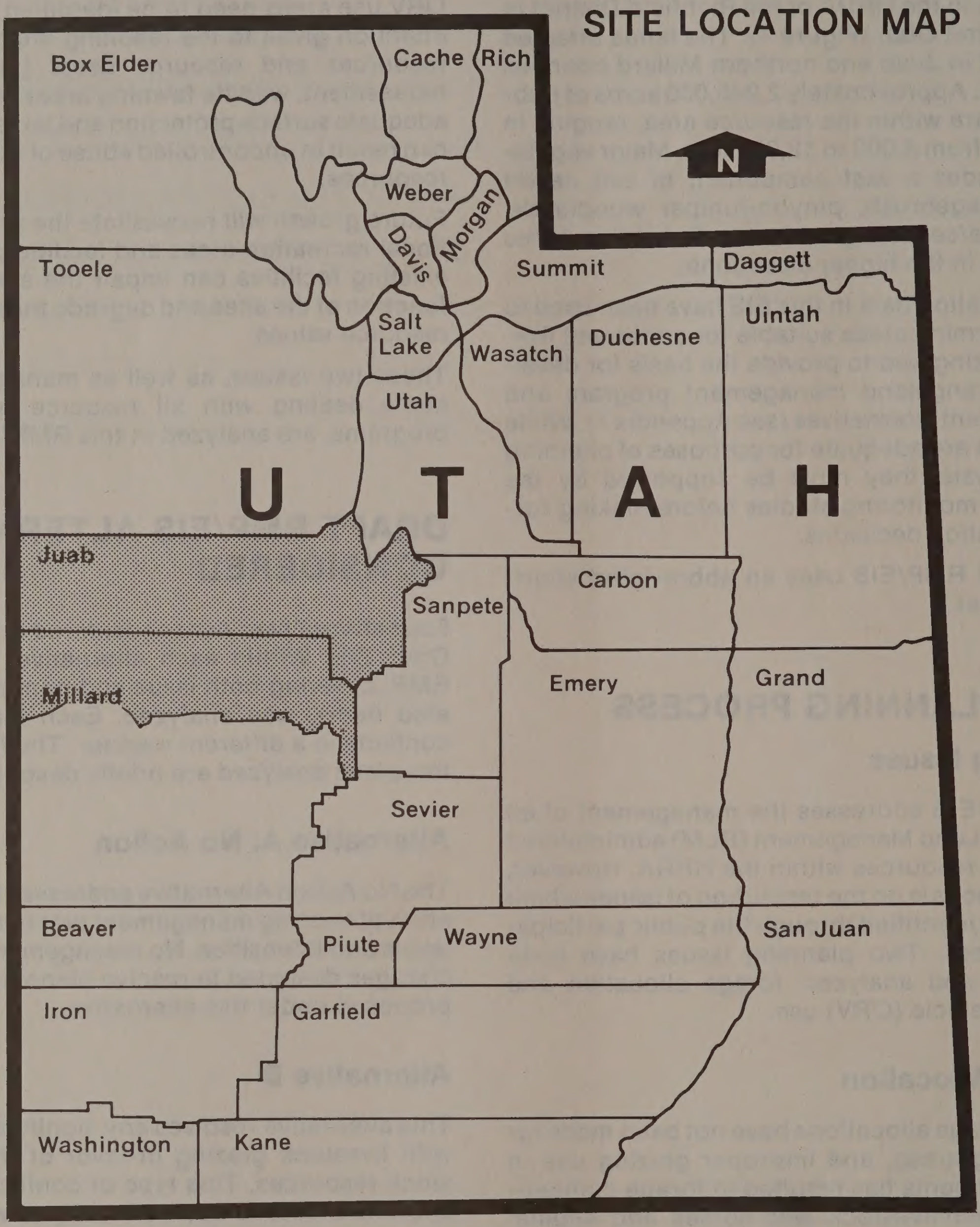
SITE LOCATION MAP
N
Box Elder
Cache
Rich
Weber
Morgan
Davis
Tooele
Summit
Daggett
Salt Lake
Uintah
Duchesne
Wasatch
Utah
U T A H
Juab
Carbon
Sanpete
Millard
Emery
Grand
Sevier
Beaver
Piute
Wayne
San Juan
Iron
Garfield
Washington
Kane

FIGURE 1

## SUMMARY

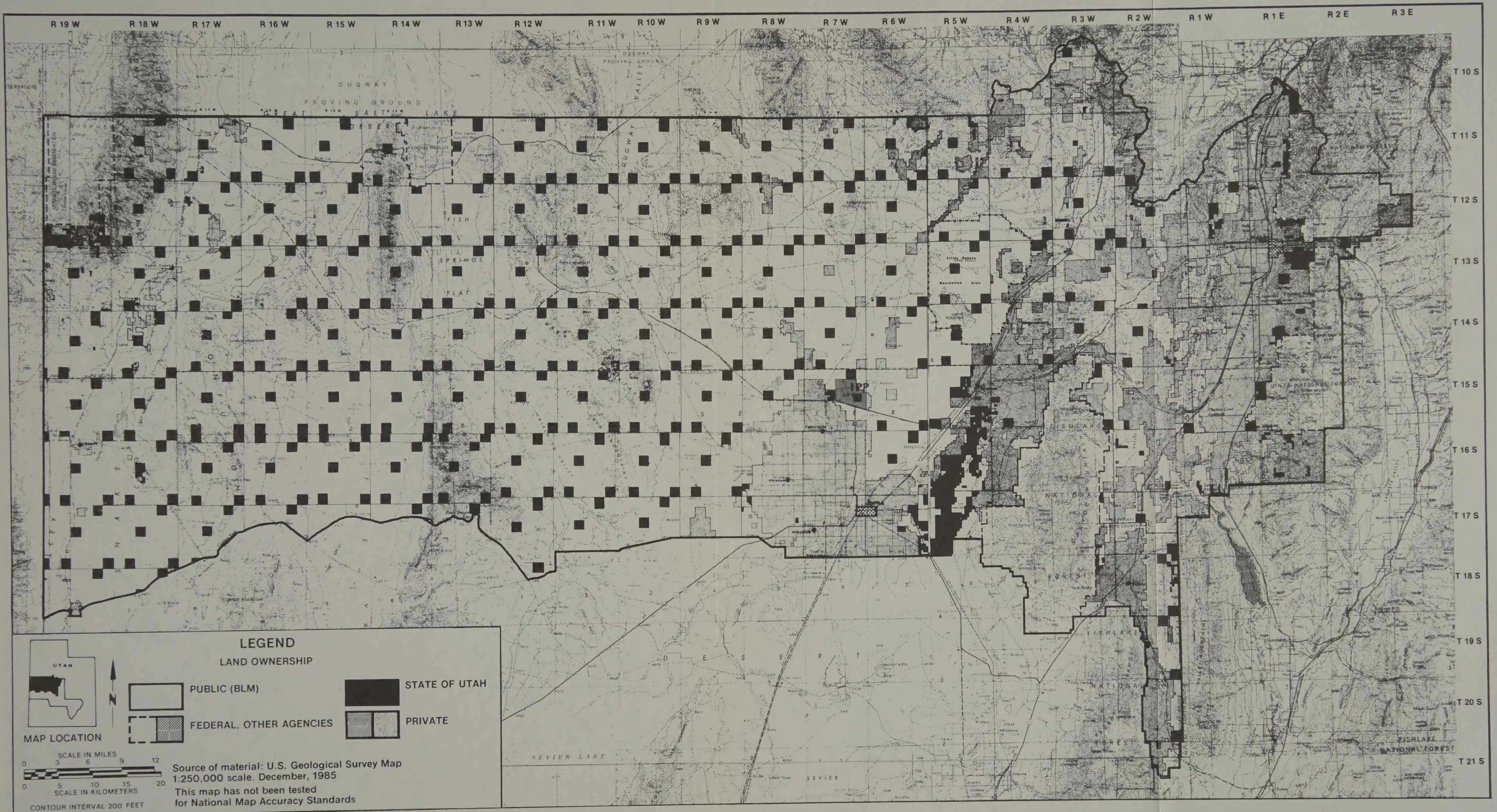

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FIGURE 2

HOUSE RANGE RESOURCE AREA INCLUDING LAND STATUS

designated for special management (Areas of Critical Environmental Concern [ACEC], Outstanding Natural Area [ONA], etc.), and present oil and gas categories would become more restrictive in those areas. In order to preserve wildlife and watershed values, ORV use would be limited to existing roads and trails in seven allotments.

### Alternative C

This alternative is designed to maximize livestock production. Other resource production would be enhanced only to the point that it does not conflict with livestock use. All competitive forage would be allocated to livestock. Noncompetitive forage would, in turn, be allocated to wild horses and mule deer. Lands actions would follow the Alternative B proposal because there is no conflict with livestock. No special designations (ACEC, ONA, etc.) would be made, and all public lands in the resource area would remain open to mineral entry except those under protective withdrawal. Recreation use (ORV use) of the area would be curtailed during periods of livestock use. Twenty-four allotments would be closed to ORV use to protect rangeland values.

### Alternative D

This alternative represents a balance of resource uses in the HRRA. Livestock use would initially be licensed at the existing active preference level. Grazing allotments would continue to be monitored to identify needed problems, stocking adjustments, and needs. Forage for wildlife would be allocated to maintain current wildlife numbers and permit continued population growth. Present wild horse management would continue in accordance with the Wild Horse and Burro Act of 1971. Lands actions would follow the Alternative B proposal, and nine areas would be designated for special management (ACEC, ONA, etc.). Present oil and gas categories would become more restrictive in those areas. Lands would remain open to mineral entry except where withdrawn. ORV use would be limited and controlled to protect watershed and wildlife values.

### Alternatives Eliminated From Detailed Study

Three potential alternatives have been considered but not carried forward for detailed analysis. The elimination of livestock grazing was considered but not carried into the analysis. The elimination of livestock grazing would not serve any identified need. In addition, the "No Grazing" Alternative does not constitute a reasonable or viable alternative and is not consistent with the Congressionally mandated Public Rangeland and Improvement Act of 1978.

Alternative forage allocation levels for wild horses were also considered but not carried into the analysis. Current inventory information indicates that an optimum viable herd of 215 for the two herd management areas (HMAs) could be maintained with no serious competitive forage conflicts with livestock or wildlife. No problems with current wild horse management or alternatives to the optimum levels of use were identified at any stage of the planning process. For these reasons, alternative forage allocations and herd sizes serve no identified need.

Alternatives for the management of Wilderness Study Areas (WSAs) (Figure 3) in the HRRA were likewise considered but dropped. In Utah, a Statewide Wilderness EIS is being prepared to assess impacts of wilderness designation and to present recommendations as to whether each WSA is suitable or nonsuitable for wilderness designation. The RMP/EIS will, therefore, not discuss suitability recommendations. WSAs will continue to be managed under BLM Wilderness Interim Management Policy, until Congress makes a decision as to their designation. Any decision to designate wilderness in the HRRA would constitute a plan amendment.

## PUBLIC COMMENTS

Prior to the comment period, few people have responded to requests for input in the planning process for the HRRA. During the comment period for the Draft RMP/EIS, 31 letters were received and six people attended the open house held in Fillmore, Utah. Five of the six attending the open house also submitted letters. Of the 31 letters received, nine were from government offices, eight from environmental organizations, seven from resource user groups, and seven from individuals.

## THE PROPOSED RMP

The proposed RMP is taken mostly from Alternative D, but has additions from alternatives B and A.

## Summary of Impacts From the Proposed RMP

A summary of the environmental consequences resulting from the proposed RMP is presented below:

### VEGETATION

An overall decline in productivity would occur during the short term on 38 allotments until 5 years of monitoring is completed, provided those allotments were fully activated to preference. This monitoring, subsequent adjustments, improved management, and range improvements, where necessary, would increase overall productivity. No impact to sensitive plant species has been identified. No vegetation species or plant communities would be irretrievably lost.

### LIVESTOCK

If grazing use were licensed at active preference, overgrazing would occur on 38 allotments. There would be short-term reductions in active preference. The beneficial impacts resulting would be long term.

### WILDLIFE

#### Mule Deer

Forage allocation to livestock, combined with controlled ORV use, would lead to an increase in deer population numbers and productivity over both the short and long terms.

#### Elk

Forage allocations to elk would not result in any change to elk populations.

#### Antelope

Forage allocations to antelope would result in a substantial increase in antelope numbers in both the short and long terms.

#### Rocky Mountain Bighorn Sheep

Over the short or long terms, bighorn sheep numbers would increase due to transplants and increased allocation.

#### Riparian Habitat

The proposed plan would improve the condition of riparian habitat over the long term.

#### Threatened, Endangered, and/or Sensitive Species

No change in bald eagle populations is expected in either the short or long term. Populations and habitats of the Bonneville cutthroat trout and least chub would improve.

#### Raptors

No impact.

### WILD HORSES

No adverse impacts are expected to occur to wild horses. However, there could be some accidental loss due to stress during capture and removal programs and increased human disturbance. Horses would continue to be managed in accordance with the Wild Horse and Burro Act of 1971. Superior stock would be introduced periodically to improve the herds over the long term. Capture and removal programs would be necessary approximately every 5 years.

### RECREATION

Any modification to the visual quality of the area would last into the long term, although any contrast with the surrounding natural landscape would be lessened substantially within 5 years after the project. Any special designations would last into the long term. Cultural resources would not be affected.

### MINERALS

Oil, gas, and geothermal exploration and development would be more restrictive over the long term because of the acreage increases in categories 2, 3, and 4. Little or no change is expected in locatable or saleable mineral activities.

### WATERSHED

If grazing use were licensed at active preference, subsequent overgrazing on 38 allotments could adversely impact watershed over the short term by increasing sediment yield and runoff. The monitoring proposed would verify any overgrazing problems. Those problems could be corrected by grazing adjustments in the long term. The increased vegetation cover resulting from proposed vegetation treatments would decrease runoff and sediment yield over the long term. ORV restrictions proposed would, likewise, result in decreased runoff and sediment yield over the long term.

### SOILS

If grazing use were licensed at active preference, subsequent overgrazing on 38 allotments could adversely impact soils over the short term by increasing erosion. Following the monitoring proposed, the necessary changes made would correct any overgrazing problems in the long term. The increased vegetation cover, resulting from vegetation treatments proposed, would decrease erosion over the long term. ORV restrictions proposed in all alternatives would, likewise, result in decreased erosion over the long term.

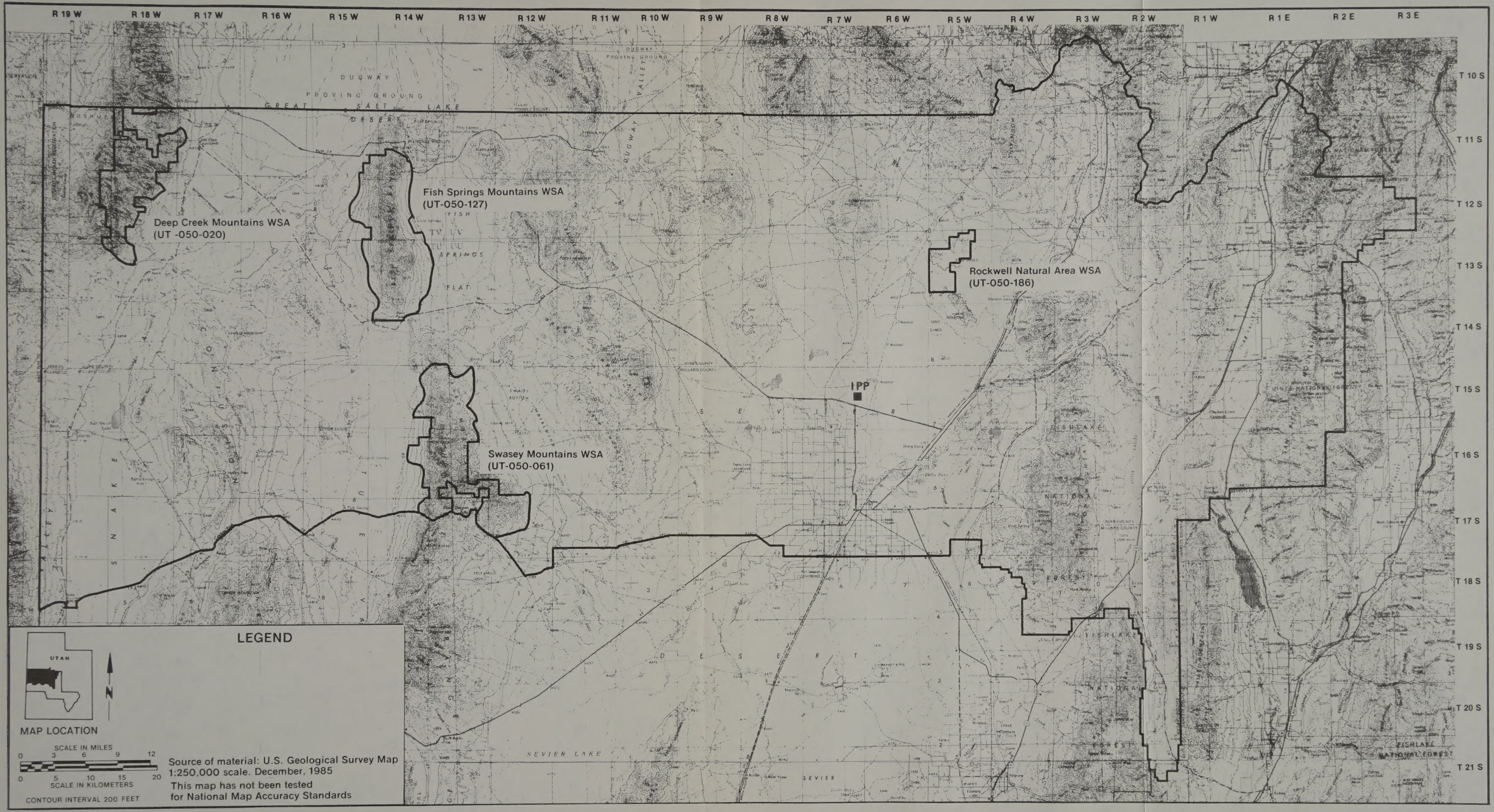

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FIGURE 3
WILDERNESS STUDY AREAS

**FOREST PRODUCTS**

No impact.

**FIRE MANAGEMENT**

No impact.

**ECONOMICS**

There would be no initial impact on net ranch incomes if grazing use remained at current levels. Activating preference could cause long-term losses in net ranch incomes to those operations involved with the 38 allotments where overgrazing could occur. The 38 allotments to be monitored may experience grazing reductions, but this would probably not adversely affect positive cash incomes in the long term.

# CHAPTER 1
# INTRODUCTION

## PURPOSE AND NEED

The Resource Management Plan (RMP) is being prepared to provide a framework of goals and objectives for future public land management in the resource area. The RMP addresses all public land resources and will be a complete multiple-use plan.

The RMP will identify allowable resource uses and levels of use or production to be maintained, resource condition goals, and general management practices. The RMP identifies support actions and the need for more detailed or specific plans.

The RMP is designed to meet requirements of the Federal Land Policy and Management Act of 1976 (FLPMA). Policy goals defined in this Act state that:

1. National interest will be best realized if public lands and their resources are periodically and systematically inventoried.
2. Present and future resource uses are to be protected through a land use planning process.
3. Public lands are to be managed in a manner that protects the quality of the environment.
4. Management is to be on the basis of multiple use and sustained yield.
5. Public lands are to be managed in a manner that recognizes the nation's need for domestic sources of minerals, food, timber, and fiber.

**TABLE 1 - 1**
**Existing MFPs, HRRA**

| Plan Name | Coverage | Plan Date |
|---|---|---|
| Sevier River MFP | Tintic Planning Unit | 1973 |
| Sevier Desert MFP | | 1973 |
| Tintic MFP | | 1974 |
| West Desert MFP | Topaz Planning Unit | 1973 |
| House Range MFP | | 1972 |

The House Range RMP is needed to update the five existing management framework plans (MFPs) for the resource area (see Table 1-1). The RMP concentrates the planning effort in those areas where the greatest benefit will be provided.

A second need for this plan is to meet the requirements for a site-specific grazing environmental impact statement (EIS), ordered by the United States District Court, District of Columbia, in Natural Resources Defense Council, Inc., versus Morton, 388 F. Supp. 829 (1974). In Natural Resources Defense Council, Inc., versus Andrus, 448 F. Supp. 802 (D.D.C. 1978), the court called for completion of all grazing EISs by 1988. The House Range Resource Area (HRRA) grazing EIS is here incorporated into the RMP/EIS; livestock management is identified as a required issue for impact analysis.

## RELATION TO THE DRAFT RMP/EIS

Because the Final RMP/EIS is prepared using a short-form final format, it is necessary to introduce the alternatives used in the Draft RMP/EIS. Corrections that should be made to the Draft RMP/EIS are contained in an errata section in Chapter 6 of this Final RMP/EIS. Following the explanation of alternatives considered is a section describing the planning process used in preparation of this plan.

### Alternatives Formulation Overview

Four complete RMP alternatives have been prepared for the HRRA. These alternatives provide a range of choices from those favoring resource production to those favoring resource protection. Each alternative has its base in the Management Situation Analysis (MSA) that was prepared during step 4 of the planning process, and represents a plan to guide future management of public lands and resources.

There are two general purposes to each alternative: (1) the planning issues must be addressed completely; and (2) the overall management prescriptions must guide the multiple-use management of all resources—including those which were not issue related. These lands, resources, and programs not affected by the resolution of any issue would be managed in the future as they are at present (i.e., where no problem was identified that needed corrective action, no action will be taken). Any future changes in the management of these resources would be permitted on a case-by-case basis and in accordance with applicable laws, regulations, and policies.

All rangeland inventory information was collected using the Rangeland Value Inventory and Monitoring System (RVIMS) described in Appendix 1. The alternatives described in this chapter, as well as the description and analysis found in chapters 3 and 4 of the Draft RMP/EIS, were based on the RVIMS system. Although only 1 to 2 years of data have been collected using this method, those data represent the best available and, in some cases, the only data available for the HRRA. For analysis purposes, these data are assumed to be accurate. However, the Bureau of Land Management (BLM) recognizes the limitations of data collected during a one or two time inventory. Therefore, additional 3-5 year monitoring studies will be conducted in order to support or refine allocations before making final allocation decisions.

## Description of Proposed Plan

The purpose of this alternative is to provide a balanced framework within which all of the resources, competing or otherwise, would be given consideration. Land actions would continue according to BLM policy. No lands would be designated for disposal. All public lands would be retained in Federal ownership. Nine areas that need special management to protect identified resource values have been proposed for special management designation.

All public lands in the resource area would remain open to mineral entry, except those lands presently under protective withdrawal and those areas proposed for withdrawal. Surface protection would be addressed in accordance with the provisions of the Surface Management Regulations (43 CFR 3809). All Federal lands would remain open to oil and gas, geothermal, and solid mineral leasing and development unless otherwise designated, with the exception of changes in leasing categories on those areas where a category change is necessary to prevent environmental degradation. No saleable mineral disposals would be permitted in leasing category 3 and 4 areas if impacts would occur to those resources protected.

Livestock use numbers would initially remain at active preference (demand). Grazing allotments would continue to be monitored to identify problems and needs. On those allotments presently not meeting forage demand, range condition would be improved through the application of grazing management systems. The HRRA would continue to license requested livestock use numbers, not to exceed the individual active preference. Thirty-eight allotments would receive priority for monitoring to determine if reductions are actually necessary.

Present wild horse management will continue on the two HMAs in the resource area. The Confusion HMA currently supports 60 horses, while the Swasey HMA supports 110 horses. Wild horses will continue to be managed in accordance with the Wild Horse and Burro Act of 1971. New superior stock would be added to the herd in an attempt to provide and maintain a healthy and genetically sound herd.

Forage for wildlife would be allocated to maintain current wildlife numbers and permit continued population growth. ORV use would be controlled during periods of heavy wildlife use or fawning. Seven springs will be developed for wildlife in critical summer habitat areas.

Special recreation use permits will continue to be processed. Recreation Management Plans will be adopted for Topaz Mountain and Deep Creek Mountains. ORV use will be limited and controlled to protect the area's watersheds.

Forestry management areas would be the same as described in Alternative A. The objective would be to decrease pinyon-juniper invasion of other vegetation types, salvage woodland products from areas subject to vegetation treatment, and utilize woodland products in all suitable harvest areas.

### SPECIAL MANAGEMENT DESIGNATIONS

This plan recommends several areas for special management designation (Areas of Critical Environmental Concern [ACEC], Outstanding Natural Area [ONA], Class III Recreation Area, etc.). This is being done in order to protect the important and unique resource values present in these different areas. This RMP specifies, by alternative, the type of designation proposed, the size of the area, and which oil and gas leasing category would be applied. For purposes of analysis, it is assumed these areas would be managed to prevent any degradation of the resources these special areas are set aside to protect. Specific activity planning for each area will be done after selection of a RMP.

The specific proposals made in each alternative are outlined in Chapter 3.

## PLANNING PROCESS OVERVIEW

The BLM planning system is a nine-step process that requires an interdisciplinary approach at each step. The following is a brief discussion of each step:

### Step 1—Identification of Issues

Identification of issues orients the planning process to management problems and land use conflicts which are of the greatest importance to the management and interested publics. Aside from BLM managers and staff, public input is sought from the general public, interest groups, public land users, other Federal agencies, State and local government officials, and Indian tribes. Public participation activities are summarized in Chapter 5 of the Draft RMP/EIS.

### Step 2—Development of Planning Criteria

Planning criteria are the standards and constraints identified by the manager and interdisciplinary teams to guide development of resource management decisions. They concentrate and focus decisionmaking, analysis, and data collection. Planning criteria are based on law and policy, local management constraints, inventory results, and public participation.

### Step 3—Inventory Data and Information Collection

As a result of steps 1 and 2, inventory of relevant resource data is planned and conducted. Issues and criteria help identify data requirements for issue resolution. Where existing information is lacking, new inventories are performed to collect needed data.

### Step 4—Analysis of the Management Situation

This step summarizes the facts and figures needed to develop alternatives. Resource capabilities and demands are identified for the present situation. Future demand is then identified, and an analysis is made assessing the ability of the resource to meet that demand. Issues, planning criteria, and inventory data are key elements in this analysis.

### Step 5—Formulation of Alternatives

Alternatives identify a range of resource uses and management practices which respond to the planning issues. The alternatives identified reflect resource tradeoffs favoring commodity production on one extreme to environmental protection on another. These alternatives have been reviewed by the public in the form of a newsletter mailed to about 400 people.

### Step 6—Estimation of Effects of Alternatives

The environmental consequences of the alternatives are analyzed and documented in this step. Documentation of impacts aids the decision maker and the public in understanding the tradeoffs and change required by each alternative and the relationships between alternatives. Consideration of physical, biological, and economic impacts is used to select a preferred alternative.

### Step 7—Selection of the Preferred Alternative

The decision maker selects a preferred alternative, based upon a comparison of the alternatives, their impacts, and their success at resolving the issues.

### Step 8—Selection of the Resource Management Plan

Comments from the public and other State and Federal agencies on the Draft RMP and EIS are evaluated. The existing analysis, new information, workable alternatives not previously considered, or errors brought to light through review and evaluation of the draft become the base for selecting the proposed RMP. The RMP and Final EIS are published for public review and a State and local planning consistency review. The public is allowed to protest the planning decisions as outlined in 43 CFR 1600.

### Step 9—Monitoring and Evaluation of the Plan

This step includes the implementation of the final plan that has been selected. In this step, site-specific activity plans are developed to guide on-the-ground activities in meeting stated management plan objectives. Monitoring provides information for judging the effectiveness of planning decisions and the on-going utility of the plan. Where evaluations determine the plan to be ineffective in meeting stated goals or where new conditions change such goals, the plan can be modified through the planning amendment process or through development of a new plan. Specific monitoring intervals and evaluation standards are established by the plan.

## PLANNING ISSUES

Issue development began on January 24, 1980, with a meeting of BLM managers and resource specialists. Numerous managerial problems, concerns, and resource conflicts were formulated into a list of several tentative issues. An interdisciplinary team refined this list, which was then presented to the public beginning in February. The planning criteria used to resolve conflicts between various resource uses were published in State and local newspapers in August. Review and comment on the planning process thus far in the HRRA were requested at that time. Public input and on-going BLM analysis resulted in further refinement of the issues.

Two issues (forage allocation and ORV use), as well as management concerns dealing with all resource management programs, are analyzed in this RMP/EIS.

An Analysis of the Management Situation (planning step 4) was completed, which summarized the facts and figures needed to develop alternative RMPs (planning step 5). This document represents steps 6 and 7.

### Forage Allocation

Proper forage allocations have not been made for all grazing areas, and improper grazing use in some allotments has resulted in forage competition between livestock, wild horses, and wildlife. Grazing animals are an important part of the rangeland environment and provide economic returns to the local communities in terms of employment and recreation.

Land treatments and developments are needed to improve forage for grazing animals and to enhance watersheds and wildlife habitat. These treatments and developments alter the natural visual appearance of land and may have an adverse impact on ecological relationships.

### Off-Road Vehicle Use

ORV use areas need to be identified with special attention given to the resulting impacts to other resources and resource users (i.e., livestock harassment, wildlife fawning areas, etc.). Lack of adequate surface protection and law enforcement can result in uncontrolled abuse of other valuable resources.

Future growth will necessitate the need for additional recreation areas and facilities. Overuse of existing facilities can impair the aesthetics and function of the sites and degrade the surrounding resource values.

## PLANNING CRITERIA

In the early stages of the RMP process, planning criteria were identified which directed the planning efforts. These criteria were based on laws, Executive Orders, regulations, policy, goals, and local consultation. The criteria established the bounds of planning. Regardless of the proposal, the criteria dictated that laws, regulations, and policy could not be ignored or sidestepped in any alternative course of action. The criteria were published in a pamphlet in August 1980 and distributed to the public. The criteria were used and gave direction and constraints to the plan.

# CHAPTER 2

# THE PROPOSED RESOURCE MANAGEMENT PLAN

## INTRODUCTION

This chapter summarizes the various physical, biological, and socioeconomic characteristics of the resource area. Much of the information presented here is summarized from the House Range Resource Area (HRRA) Management Situation Analysis (MSA), which is a compilation of detailed resource data. The purpose of this chapter is to describe the proposed Resource Management Plan (RMP). The significant resources of the area that could be affected by the interrelationships of these resources, and the types and significance current management problems are described in the Draft Environmental Impact Statement (EIS).

This chapter is divided into two sections. The first section describes the setting (i.e., geography, topography, geology, climate, air quality, sociology, and economics). The second section contains a description of those resources affected by the proposed RMP (e.g., vegetation and range, wildlife, recreation).

This is followed by a description of the proposed action, expected levels of production, constraints and necessary practices, guidelines for developing detailed site-specific plans, support requirements, general implementation sequence and priority, monitoring, and evaluation.

Site-specific actions (i.e., plans describing on-the-ground procedures for resource developments) are not discussed in the RMP. These will require a separate Environmental Assessment (EA) and a detailed plan.

## THE SETTING

### Geographic Description

The HRRA consists of more than 2,245,000 acres of public land. Two-thirds of the area lies in the southern portion of the Great Salt Lake sub-basin, while the eastern one-third of the area falls in the Sevier River sub-basin. The area includes all of Juab County and a portion of Millard County. The topography of the area varies from high mountain ranges (12,087 feet in the Deep Creek Mountains) to barren valley floors (4,400 feet in Tule Valley). The area is semi-arid, with an annual rainfall of about 8 to 10 inches. Major vegetation includes a vast component of salt desert shrubs, sagebrush, pinyon-juniper woodlands, and native/seeded grasslands. Wildlife species found in the area include mule deer, antelope, elk, bighorn sheep, chukars, sage grouse, and raptors. The resource area is also used by sheep, cattle, and wild horses.

### Topography and Geology

All of the resource area and the western one-third of the State lies in the Great Basin physiographic province. This topographic region is not a single basin, but consists of block-faulted mountains and intermontane basins in approximately equal proportions. The landforms consist of an arid desert lowland without external drainage and north-south trending, isolated mountain ranges. The mountains are short ranges, rising abruptly to heights of 3,000 to 5,000 feet above the surrounding desert floor. Over 150 mountain ranges are found throughout the Basin and Range province. Many intermontane basins exhibit internal drainage where runoff collects into depressed valley basins and eventually evaporates from desert playas (Thornbury, 1965).

During his expeditions of 1843 and 1845, John C. Fremont originally designated this topographic region as the "Great Basin" because he recognized the unique internal drainage pattern. The eastern portions of the resource area show recent evidence of volcanism, including such landforms as lava flows, calderas, cinder cones, and pit craters.

### Climate and Air Quality

HRRA climate, typical of the Great Basin, is characterized by limited precipitation, low relative humidity, rapid evaporation, high frequency of clear skies, and large daily and annual ranges in temperature.

Precipitation averages 8 to 10 inches per year over most of the resource area, with considerably greater unrecorded amounts in mountain elevations. Rainfall peaks in the late summer and early fall thunderstorm season. Low pressure systems, originating in the Pacific Ocean and moving through the Great Basin, result in a secondary precipitation peak in the spring. Utah is the second driest state in the union (Nevada is first), and rapid evaporation is an important climatic variable.

Fluctuations in daily temperature of 30 to 35 degrees Fahrenheit (F) are experienced because of low relative humidity. Representative temperature distributions have been recorded at Fish Springs Refuge (elevation 4,350 feet mean sea level [m.s.l.]), Delta (4,630 feet m.s.l.), Partoun (elevation 4,750 feet m.s.l.), and Levan (elevation 5,300 feet m.s.l.). These data show great seasonal extremes, ranging from low winter values of -28 degrees F to summer highs of 106 degrees F.

The length of the growing season is closely correlated to elevation. Highest elevations generally have the shortest growing season because of lower minimum nighttime temperatures. In the resource area, the shortest growing season (20 days) occurs in the higher elevations of the Deep Creek Mountains. Elevations in this area reach 12,100 feet m.s.l. In the western valleys and Sevier Desert, the growing season is typically 120 to 160 days. The length of the growing season decreases sharply to the east in the elevations of the Pavant Range, where the frost-free period is generally between 60 and 140 days (Environmental Applications, 1981).

Air quality in the resource area has been designated as Class II by the U.S. Environmental Protection Agency (EPA). This classification permits moderate deterioration normally accompanying well-controlled growth. The nearest Class I area (extremely limited air quality degradation permitted) is Capitol Reef National Park, approximately 70 miles to the east.

Emissions inventory data (Utah Bureau of Air Quality, 1983) indicates that the resource area is little affected by air pollution. There is concern, however, over possible future air and visibility degradation in the West Desert by the Intermountain Power Project (IPP), currently under construction near Delta. Suspended particulates, sulphur oxide, nitrogen oxide, and hydrocarbons are very low and are far below the maximum allowed under the National Ambient Air Quality Standards (NAAQS). In the summer, long periods of intense sunshine causes strong vertical air turbulence, resulting in good pollution dispersion potential. In the winter, high pressure systems dominate the area, causing stable meteorological conditions and periods of relatively poor pollution dispersion potential.

Unimpaired visibility is an important value of the resource area. Panoramas of Great Basin block-faulted mountains, rising steeply from sagebrush covered plains, are greatly enhanced by the generally excellent clarity of the air. The resource area is near the center of the area with the highest visual range (70+ miles) in the United States (EPA, 1979).

## Sociology

Most population centers in the HRRA are found along U.S. Highways 6 and Interstate (I) 15, near the foothills of the Pavant Mountains and scattered along the eastern perimeter of the planning unit. The small farming settlements of Callao, Trout Creek, Partoun, and Gandy, connected by a county road in the western portions of the resource area, are exceptions to this locational pattern. The Goshute Indian Reservation is located in the northwest corner of the resource area.

Historically, population expansion by Utah's Mormon pioneers was a planned movement into successive tiers of longitudinal lowlands along the Wasatch Front and high plateaus. The first tiered settlement had taken place along the "Mormon Corridor" from Salt Lake City to the Pacific coast (Meinig, 1965). The communities along I-15 exemplify the original corridor settlement pattern and function today as retail centers (Murphy, 1974). In the western portions of the resource area, the settlements were established later and have not developed as commercial centers. The agrarian lifestyle and economic base of these populated areas persist up to the present time.

These communities have been relatively culturally homogeneous and have valued their small-town way of life, community solidarity, aesthetic, and recreational opportunities as important life-style advantages. As a consequence, the area is regarded as a good place to live and raise a family. Residents would probably not consider relocating to another area for alternative employment opportunities. For the most part, livestock operators recognize a multiple-use concept of the surrounding public lands. Local residents perceive "access to the outdoors," "air quality," and "community spirit" as important community advantages. "Opportunity to earn a living" and "appearance" were considered significant local community disadvantages needing improvement (U.S. Department of the Air Force, 1981a).

With the exception of Delta, all of the resource area communities can be described as long-established, relatively stable agricultural centers. Delta is currently in a period of social and economic transition because of the recent introduction of the IPP constructional work force. The resultant social structural changes and additions to Delta's housing, services, and commercial infrastructure are already evident.

Another major interest group using resource area lands is conservation and recreational organizations, with state and national affiliation. Of this interest group, preservation-oriented organizations seem to show the most concern for aesthetic values, scenic quality, and limited recreation land utilization, particularly on the resource area's block-faulted mountain ranges. Rockhound groups consider the area unique for mineral collecting and geologic sightseeing (Staatz and Carr, 1964).

Seventy miles south of Wendover, Utah, the Goshute Indian Reservation occupies 108,779 acres astride the Utah/Nevada border (38,210 acres in Utah and 70,569 acres in Nevada). The Deep Creek Valley has historically been a major occupation area for the tribe. Approximately 170 members in 35 housing units reside on reservation lands. Goshute revenue is derived from the sale of cattle, sheep, hay, and cattleguards manufactured by a reservation steel fabricating plant. The main emphasis for the Tribe's economic growth will continue to be agriculture. They also hope to further develop the reservation's recreation potential, expand the steel fabricating plant, expand and upgrade housing, and improve communications, fire safety, and health services (U.S. Department of the Air Force, 1981b).

## ECONOMICS

This section concentrates on Juab and west Millard counties in Utah and the communities of Delta and Nephi.

The prevailing character of the region has been historically rural in nature, with agriculture playing a key role in economic development. However, in recent years, agriculture's importance has significantly declined. Today, the dominant industry in the region is the construction sector with the building of the IPP coal-fired electrical generating station north of Delta in west Millard county. A wide range of sectors follow producing a variety of goods, services, and resources that contribute to the area's economy. They include banking services, convenience goods, agriculture products, beryllium, gypsum, lava rock, and lime.

By the end of 1983, 2,464 workers or 30 percent of the region's total work force was employed at the IPP construction site (Paul Nelson, 1984a). By March of 1985, this force had grown to 3,890. Since that time, it has begun to slowly phase down as construction nears completion (Paul Nelson, 1985b). The plant is scheduled to be completed by the fourth quarter of 1987, with 520 operation and maintenance workers remaining to operate the facility (Paul Nelson, 1985c). The decision to implement construction of units three and four is currently pending. Nevertheless, the go ahead on these two units will again propel construction employment to probable 1983-85 work force levels.

Between 1980 and 1983, total personal income in Juab County decreased 16 percent; while during the same period, Millard County's income from wages and salaries more than doubled, largely on the strength of the construction sector. In 1983, workers, who made up the construction sectors in Juab and Millard counties, earned 32 percent of total personal earnings for the region, thus forming the single largest source of personal income. Other significant sectors contributing to combined personal income include: government services 18 percent; agriculture, transportation, public utilities, and retail trade each contributing 9 percent of total earnings; with manufacturing supplying 7 percent of personal income and wages to the region. In 1983, Juab County's per capita income was 77 percent of the State's average of $9,005. Millard County's per capita income hovered at 80 percent of the State's level. In 1983 in Juab County, unemployment was 20.1 percent, while in Millard County, unemployment was 8.4 percent. During the same period, the State's unemployment rate was 9.2 percent rate (see Table 2-1).

In 1981, the IPP generating station construction resulted in significant economic, social, cultural, and environmental impacts within the region, initially manifested by a population explosion in west Millard County. Between 1980 and 1982, west Millard County grew 27 percent in population; however from 1982 to 1984 (as IPP construction expanded), it burgeoned 68 percent to 10,259, reflecting the magnitude of the IPP impact on the region (Paul Nelson, 1985a). As a comparison during this time frame, the State's population increased 3 percent. Between 1980 and 1984, Juab County's population increased 8 percent to 6,002, representing a smaller growth rate than West Millard County, which grew 114 percent during the same period (Paul Nelson, 1984b). See Table 2-2 for projected population growth rates

## TABLE 2-1

Personal Income and Employment
for Juab and Millard Counties
1980 and 1983 (in $1,000)

| Income/Employment by Sector/Type | Juab County | | | | | Millard County | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1980 | Percent of Total | 1983 | Percent of Total | Percent Change | 1980 | Percent of Total | 1983 | Percent of Total | Percent Change |
| A. INCOME: | | | | | | | | | | |
| Agriculture | 513 | 3 | 559 | 3 | -9 | 8,391 | 25 | 7,455 | 11 | -11 |
| Total Agriculture | 613 | 3 | 559 | 3 | -9 | 8,391 | 25 | 7,455 | 11 | -11 |
| Non-Agriculture | | | | | | | | | | |
| Agriculture Services | 70 | -- | 90 | -- | 29 | 564 | 1 | 802 | 1 | 42 |
| Mining | 1,744 | 8 | 728 | 4 | 58 | 2,723 | 8 | 3,264 | 5 | 20 |
| Construction | 3,875 | 17 | 1973 | 10 | -49 | 2,040 | 6 | 26,486 | 38 | 1,198 |
| Manufacturing | 5,616 | 25 | 3,039 | 16 | -46 | 1,614 | 5 | 3,352 | 5 | 108 |
| Transportation/ Public Utilities | 938 | 4 | 913 | 5 | -3 | 3,917 | 12 | 6,799 | 10 | 74 |
| Wholesale Trade | 835 | 4 | 1,337 | 7 | 51 | 1,370 | 4 | 1,760 | 2 | 28 |
| Retail Trade | 2,653 | 12 | 2,968 | 16 | 12 | 3,266 | 10 | 5,017 | 7 | 54 |
| Finance, Insurance, and Real Estate | 448 | 2 | 439 | 2 | -2 | 1,024 | 3 | 1,084 | 2 | 6 |
| Services | 1,845 | 8 | 1,251 | 7 | -32 | 2,061 | 6 | 3,137 | 4 | 52 |
| Government Services | 3,837 | 17 | 5,621 | 30 | 46 | 6,737 | 20 | 10,795 | 15 | 60 |
| Total Non-Agriculture | 21,911 | 97 | 18,359 | 97 | -16 | 25,316 | 75 | 62,496 | 89 | 147 |
| Total Personal Income | 22,524 | 100 | 18,918 | 100 | -16 | 33,707 | 100 | 69,951 | 100 | 108 |
| Per Capita Income | 6,007 | [a]78 | 6,910 | [a]77 | 15 | 5,817 | [a]76 | 7,168 | [a]80 | 23 |
| State Total | 7,678 | | 9,005 | | 17 | | | | | |
| B. EMPLOYMENT: | | | | | | | | | | |
| Employment Force | 2,290 | | 2,208 | | -4 | 3,707 | | 6,008 | | 62 |
| Unemployment Rate | 8.6 | | 20.1 | | | 5.6 | | 8.4 | | |
| State Total | 6.3 | | 9.2 | | | | | | | |

Source: USDC, Bureau of Economic Analysis, 1985; Utah Department of Employment Security, 1985a; Utah Department of Employment Security, 1985b.

[a] Percent of State total rounded.

## TABLE 2-2

Baseline and Projected Population Growth
Juab and Millard Counties

| Location | Year | | | | | |
|---|---|---|---|---|---|---|
| | 1980 | 1983 | 1985 | 1990 | 2000 | 2010 |
| Juab County | 5,550 | 5,850 | 6,900 | 6,900 | 7,800 | 9,300 |
| Millard County | 9,050 | 11,250 | 17,700 | 15,400 | 16,300 | 19,000 |

Source: Gocknur, 1985.

for both Juab and Millard counties, and Table 2-3 for community projections. In 1984, 63 percent of Juab County's population lived in Nephi, the county seat; while 37 percent of Millard County's population lived in Delta and 17 percent in Fillmore, the county seat located to the southeast.

Summary data of the region's existing infrastructure conditions are contained in Table 2-4. Largely, because of IPP construction, the area is progressively upgrading its infrastructure conditions to meet the needs of existing and long-term baseline population projections.

The burgeoning construction sector, as represented through IPP, has affected the region's housing vacancy rate since 1981, particularly in west Millard County where 4,164 IPP workers and their dependents reside (Paul Nelson, 1985c). The net effect has not been shortage of houses for sale as IPP provides temporary housing within the region, but the absorption of almost all rental units in west Millard County and most rental properties in Juab County. In Delta, about 25 houses are for sale, and in Nephi, 40-50 units are currently available for sale (Peterson and Moody, 1985). Within the region, the smaller towns have typically one to six houses for sale and from zero to two each rentals available.

During the fourth quarter of 1984, the school districts of Juab and Millard counties were operating at 85 percent and 72 percent of capacity, respectively, with student-teacher ratios of 19 and 25 to 1 (Paul Nelson, 1985c) (see Table 2-4). Despite the general underutilized capacity, individual schools in west Millard county operated between 92 percent and 97 percent of capacity, while Nephi Elementary School and Tintic High School operated at 106 percent and 109 percent of capacity, respectively. During the 1983-84 school year, two new schools, Delta Elementary South and Mona Elementary School, began operating to alleviate some of the crowding in the school systems within the region. Delta Middle School expanded its capacity from 600 to 950 students in 1984 (Paul Nelson, 1983). Within the Millard School District, student-teacher ratios continue to be higher than those of Juab County.

Hospital services in the region are provided by the West Millard County Hospital District located in Delta and the Juab County Hospital District in Nephi, having a capacity of 56 and 31 beds, respectively (Lesie et al., 1985). Each district has three ambulances and 20 emergency medical technicians (EMTs). Between 1982 and 1984, West Millard County Hospital District admissions increased by 22 percent, emergency visits by 117 percent, and ambulatory visits by 21 percent due in large measure to the large influx of new people to the area (Paul Nelson, 1984b). During the same period, Juab County Hospital District admissions declined 18 percent, ambulatory visits decreased 43 percent, while emergency visits increased 14 percent (Paul Nelson, 1984b).

Delta has five full-time doctors, while Nephi has three plus a part-time physician.

Law enforcement is provided in Delta by its own police force department, which has nine police officers and a patrol car for each policeman (see Table 2-4). Millard County provides police protection to Fillmore and unincorporated areas of the county through the County Sheriff's Office, which employs 17 officers and has 13 patrol cars available, a 40-bed jail facility and a juvenile holding cell (Staples, 1985). In Nephi, the police department employs five officers and has four patrol cars available for duty (Curic, Inc. and A/P Associates, 1982). The Juab County Sheriff's Office is staffed by a sheriff, four officers, and has five patrol cars and a 29-bed jail facility (Chamber, 1985). Between 1982 and 1984, some effects of an energy-related boom throughout the regions (and in particular west Millard County) could be seen through changes in selected public safety indicators, such as major crime, traffic offenses, and accident rates. During this period of time, the average monthly number of cases for major crimes in Delta increased 21 percent, traffic offenses 48 percent, and vehicle accidents increased 135 percent (Paul Nelson, 1984b). In unincorporated Millard County, major crimes increased 71 percent, while traffic offenses declined 27 percent (Paul Nelson, 1984b). During this time period, major crimes and traffic offenses in Nephi decreased 9 and 49 percent, respectively, while vehicle accidents increased 2 percent (Paul Nelson, 1984b).

Since 1982, IPP has provided Millard and Juab counties with front-end money in excess of $52 million to mitigate direct impacts from the effect of IPP construction workers and their dependents (Paul Nelson, 1985a). Nearly one-half of these monies were spent on housing accommodations for IPP workers. The rest funneled into upgrading and/or building community facilities, such as new municipal buildings, schools, a hospital, water and sewage treatment facilities, solid waste disposal, and additional monies for operation and maintenance expenses. A number of specific areas where monies were funneled and spent can be illustrated. In Delta, $7.7 million was received

TABLE 2-3

Baseline and Community Population Projections
West Millard County, Nephi, and
Other Surrounding Juab County Areas, 1980, 1985-88

| Location | Year | | | | |
|---|---|---|---|---|---|
| | 1980 | 1985 | 1986 | 1987 | 1988 |
| West Millard County | | | | | |
| Delta | 1,930 | 4,690 | 3,680 | 3,190 | 3,190 |
| Hinckley | 464 | 830 | 730 | 630 | 640 |
| Leamington | 113 | 230 | 260 | 270 | 270 |
| Lynndyl | 90 | 190 | 190 | 160 | 170 |
| Oak City | 389 | 610 | 580 | 550 | 560 |
| Unincorporated West Millard County | 1,797 | 3,920 | 3,570 | 2,100 | 2,110 |
| Total West Millard | 4,783 | 10,470 | 9,010 | 6,900 | 6,940 |
| Nephi | 3,285 | 3,810 | 3,740 | 3,550 | 3,570 |
| Other Juab Areas[a] | N/A | 2,520 | 2,520 | 2,680 | 2,700 |

Source: Paul Nelson, Inc., 1985a.

N/A = not available.

[a] Levan, Mona, Eureka, and surrounding unincorporated.

TABLE 2-4

Summary of Regional Infrastructure Conditions

| Category | Juab County | West Millard County | Nephi | Delta |
|---|---|---|---|---|
| Population (1984) | [a]6,002 | [b]10,259 | [b]3,776 | [b]4,686 |
| Infrastructure | | | | |
| Housing Units[c] | | | | |
| Single Family | 1,408 | 1,745 | 1,054 | 699 |
| Multi Family | 107 | 415 | 138 | 403 |
| Mobile Homes | 87 | 785 | 99 | 488 |
| Construction Worker Housing | -- | 1,246 | -- | -- |
| Education (84-85) | | | | |
| Students | 1,828 | 2,590 | 1,280 | [d]2,505 |
| Present Capacity | 2,147 | 3,578 | 1,450 | [d]2,778 |
| Teachers | 94 | 105 | 65 | [d]97 |
| Student/Teacher Ratio | 19.4:1 | 24.7:1 | 19.7:1 | 25.8:1 |
| Health Care | | | | |
| Hospital Beds | | | | |
| General and Long Term | 31 | 56 | 31 | 56 |
| Medical Health Care | | | | |
| Care Centers | 1 | -- | 1 | -- |
| Medical Personnel | | | | |
| Doctors | 3 | 5 | 3 | 5 |
| Dentists | -- | 2 | -- | 2 |
| Emergency Medical Service | | | | |
| Ambulances | 3 | 3 | 3 | 3 |
| Emergency Medical Technicians (EMTs) | 20 | 20 | 20 | 20 |
| Public Safety | | | | |
| Law Enforcement | | | | |
| Police Officers | 10 | 26 | 5 | 9 |
| Patrol Cars | 9 | 22 | 4 | 9 |
| Jail Space (beds) | 29 | 40 | 29 | -- |
| Juvenile Holding Cells | -- | 1 | -- | -- |

TABLE 2-4 (concluded)

| Category | Juab County | West Millard County | Nephi | Delta |
|---|---|---|---|---|
| Utility Service Demands | | | | |
| Water System | | | | |
| Connections | [e]1,927 | [f]1,590 | 1,450 | 983 |
| Supply ($10^6$ gallons/yr) | N/A | [g]905 | 900 | 775 |
| Storage ($10^6$ gallons) | [h]3.95 | [i]2.8 | 2.6 | 1.8 |
| Sewage System | Septic/lagoon | Septic/lagoon | Lagoon (100 ac.) | Lagoon (98.8 ac.) |
| Solid Waste | Sanitary landfill/dump | Dump[j] | Sanitary landfill | Dump[j] |

Note: N/A = not available.

[a] University of Utah, 1985.

[b] Paul Nelson, Inc., 1985c.

[c] USDC, Bureau of the Census, 1983; Paul Nelson, Inc., 1985b

[d] Millard District Public Schools only.

[e] Nephi, Levan, Eureka.

[f] Delta, Hinckley, Leamington, Lynndyl, Oak City.

[g] Delta, Leamington, Lynndyl, Oak City.

[h] Nephi, Levan, Eureka.

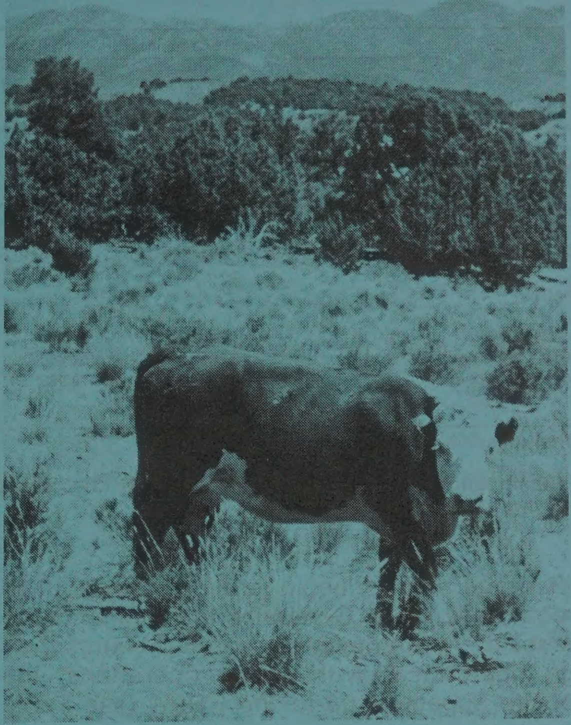
[i] Delta, Hinckley, Leamington, Lynndyl, Oak City.

[j] Being replaced by a centralized sanitary landfill.

to improve its administrative structure to deal with anticipated growth and development, to partially fund a new municipal building, to help upgrade its water and sewer system, and provide monies for increased operation and maintenance expenses (Paul Nelson, 1985a). Millard County received $8.3 million for overall county operation and maintenance expenses plus a new jail (Paul Nelson, 1985a). In addition, the communities of Hinckley, Leamington, Lynndyl, and Oak City received $6.6 million aggregately to help alleviate the impacts of IPP workers coming into their areas to live (Paul Nelson, 1985a). To the north in Juab County, Nephi received $100,000 for additional sewer treatment facilities, while Juab School District received nearly $400,000 for increased permanent school facilities (Paul Nelson, 1985a).

In general, Juab and Millard counties, including their respective communities, have been able to handle most of the added expenditures necessitated by growth in the 1980s. Revenues within Millard County grew an estimated 95 percent, expenditures increased 123 percent, while assessed valuations increased by 82 percent (Paul Nelson, 1984b). During the same time frame, Juab County's revenues and expenditures increased 35 percent and 60 percent, respectively, suggesting less economic impact from the IPP construction than received by Millard County (Hawkins, Borup, Cloward, 1985) (see Table 2-5). From Table 2-5, both counties appear to have available revenues to handle additional fiscal burdens. Both Delta and Nephi share positions of having surplus per capita revenues, indicating abilities to handle higher fiscal expenditure levels (see Table 2-6).

Although the status of agriculture's economic importance has diminished in recent years, it continues to play an important part in the region's economy. Its importance is particularly evidenced in Millard County (an agrarian-oriented community despite the presence of IPP), where in 1983, it remained the third largest source in personal income and earnings. In Juab County, the importance of agriculture today is small and considerably diminished as evidenced by its share of the county's personal income, which ranked ninth in total dollars earned (see Table 2-1).



Within the HRRA, there is an estimated 13,000 cattle that graze on BLM lands, making up about 17 percent of all cattle estimated to be in Juab and Millard counties (Utah Dept. of Agriculture, 1984). These cattle produce an estimated 2.5 million pounds of beef each year or about 1 percent of the total live weight of calves produced within Utah annually, based on a 1976-83 average (Utah Dept of Agriculture, 1984). In addition to cattle, an estimated 101,000 sheep graze on BLM lands for at least part of the year. They represent 18 percent of all sheep and lambs in Utah (Utah Dept. of Agriculture, 1984). These sheep annually produce an estimated 8.7 million pounds of meat for market or almost 25 percent of Utah's sheep and lamb production, based on an average 35.3 million sheep and lambs marketed annually in 1976-83, excluding custom slaughter and in-farm sales (Utah Dept. of Agriculture, 1984).

There are 186 cattle and sheep operations within the HRRA, including five dual cattle/sheep enterprises (see Table 2-7). Average cattle herd sizes range from 46 for small operations to 222 head for medium herds, and over 1,000 for large ranches. Sheep operations range from about 400 to 9,000 animals, with the median operation being around 2,300 ewes.

With 65 percent of public land lying in 101 BLM grazing allotments, the region's livestock industry's dependence on BLM forage becomes apparent. The dependence of ranch operations on BLM forage can be primarily guided by the percentage dependence on public lands or forage. The average cattle ranch is about 81 percent dependent on

**TABLE 2-7**
**Livestock Operations by Herd Size**
**House Range Resource Area**

| | Livestock Operations | | |
|---|---|---|---|
| | Number of Operations[1] | Average Herd Size | Estimated Aggregate Herd/ Flock Size[2] |
| Cattle | | | |
| 1-99 Cows | 89 | 46 | 2,574 |
| 100-499 Cows | 55 | 222 | 7,800 |
| 500 and up Cows | 4 | 1,033 | 2,626 |
| Sheep | | | |
| 1-2,000 Ewes | 16 | 1,371 | 24,840 |
| 2,001-4,500 Ewes | 21 | 2,781 | 67,160 |
| 4,501 and up Ewes | 1 | 9,000 | 9,000 |

[1] Includes five dual operations.

[2] Public lands; based on 13,000 cattle and 101,000 sheep who graze the HRRA.

BLM forage, while sheep operations are about 85 percent dependent. Generally, the smaller cattle ranches are more dependent on BLM lands than large operations. With sheep operations, the opposite appears true in the HRRA (see Table 2-8).

Based on average budgets of small, medium, and large cattle and sheep operations, most operators can cover their out-of-pocket costs (see Table 2-9). However, ranching operations differ in size of operation, operating cost, and degree of indebtedness. In this regard, an estimated 79 percent of the HRRA's cattle operations have less than 200 head and almost a third of the sheep enterprises run less than 2,000 ewes. Most of these businesses are too small to take advantage of the economies of scale and, in many cases, are not efficient or profitable, making their owners rely on outside sources of funding. People who operate these enterprises may be more concerned with the family quality of life derived from agriculture than in the pursuit of profits (Harper and Eastman, 1980). With current cost-price squeezes, high interest rates, high debt loads, and equity losses, larger operations are also witnessing economic difficulties with non-profit cycles. The aggregate ranch budget statistics for cattle operation in Appendices 2 through 4 summarize these continuing difficulties. See Appendix 5 for comparison. Table 2-10 shows the economic changes to livestock operators expected should the proposal be implemented.

Established grazing fee schedules represent a minimum value for public forage; however, the grazing fee for public lands ($1.35 per AUM in 1985) is not determined through the market place but instead through a formula established by the Public Rangelands Improvement Act (PRIA) of 1978. These fees, however, do not present a true measure of the value of an AUM in the West Desert; private lease rates still provide one of the best measures of value. The private lease rate within the West Desert goes for about $7.50 per AUM (Jensen, 1985). Using the $7.50 figure, the estimated annual value of BLM livestock forage provided by the HRRA is $736,680, based on average licensed use.

Although the BLM does not recognize a capitalized value for grazing preferences, the market does recognize a capitalized value whenever grazing fees are lower than their true economic value (Gardner, 1962). In the West Desert, permits are going for $35-40 an AUM (Memmott, 1985). If the entire permit value is capitalized as the ranch's value, the BLM grazing privileges in the HRRA account for $5,813,360 or about 67 percent of the aggregate ranch value of operators using forage in the HRRA. Since grazing privileges can affect both base property values and ranch income, changes in grazing privileges could also affect rancher's ability to obtain loans.

Recreation with the HRRA is dominated by ORV and camping activities at the Little Sahara Recreation Area and by water-based recreation activities at Yuba Reservoir. Other related activities include sightseeing, rockhounding, and ORV races within the region. This area is located within Utah's Central Planning District which attracts nearly $30 million in recreation monies annually. However, only a fraction of these dollars are funneled into the local economy, since most visitors are from the Wasatch Range and carry their food and supplies into the region (Dalton, 1982).

The most significant wildlife consumptive use within the region is deer hunting. In 1984, 67,149 deer hunter days, 5,970 elk hunter days and 240 antelope hunter days were in those hunt areas that impinge upon the HRRA (UDWR, 1985). The value of these hunter days was about $6.6 million. However, very little money is thought to flow into the region, because most sportsmen who hunt the region are resident out-of-community or out-of-state hunters who buy most of their supplies in their community of residence.

Fishing is largely confined to Yuba Reservoir and the Sevier River. There were approximately 14,000 fisherman days at Yuba Reservoir in 1985 (Sakaguchi, 1985). At the estimated value of $21.00 per

## TABLE 2-5

### Summary of Revenues and Expenditures in Juab and Millard Counties, Utah Fiscal Years 1980-1984

| | 1980 | | 1981 | | 1982 | | 1983 | | 1984 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Category | Juab | Millard | Juab | Millard | Juab | Millard | Juab | Millard | Juab | Millard[a] |
| REVENUES: | | | | | | | | | | |
| Taxes | $366,154 | $409,784 | $441,973 | $529,251 | $765,894 | $557,126 | $581,733 | $1,346,901 | $668,208 | $1,758,898 |
| Licenses and Permits | 60,407 | 55,550 | 1,461 | 116,999 | 1,042 | 21,308 | 9,894 | 168,101 | 1,099 | 21,750 |
| Intergovernmental Revenue | 1,274,477 | 1,352,258 | 890,066 | 1,169,183 | 959,083 | 1,248,392 | 1,185,511 | 2,131,565 | 1,865,748 | 1,430,280 |
| Charges for Services | 206,583 | 124,876 | 205,778 | 151,076 | 2,575,284 | 274,322 | 136,711 | 406,023 | 130,825 | 380,531 |
| Fines and Forfeitures | 245,835 | 320,122 | 252,697 | 209,545 | 232,717 | 243,109 | 222,702 | 257,631 | 232,250 | 225,710 |
| Miscellaneous | 151,357 | 243,480 | 162,321 | 586,950 | 155,210 | 1,790,431 | 398,007 | 475,082 | 216,145 | 1,007,616 |
| Total Revenues | 2,304,813 | 2,506,070 | 1,954,296 | 2,763,004 | 4,689,230 | 4,234,688 | 2,534,558 | 4,767,303 | 3,114,275 | 4,874,785 |
| Per Capita Revenues | 415.28 | 276.91 | 348.98 | 287.81 | 808.49 | 407.18 | 433.26 | 421.88 | 514.76 | 361.09 |
| EXPENDITURES | | | | | | | | | | |
| General Government | $405,275 | $685,850 | $482,303 | 979,708 | $512,554 | $1,185,266 | $602,606 | $1,052,279 | $663,489 | $1,272,420 |
| Public Safety | 294,869 | 354,723 | 399,975 | 515,237 | 403,132 | 713,798 | 850,515 | 922,311 | 1,507,018 | 1,875,825 |
| Public Health | 13,471 | 37,921 | 14,657 | 17,648 | 2,330,472 | 30,821 | 34,665 | 129,335 | 29,975 | 134,198 |
| Highways and Public Improvements | 830,407 | 850,823 | 514,936 | 1,101,792 | 610,700 | 1,164,899 | 692,177 | 1,294,073 | 820,384 | 1,199,037 |
| Parks, Recreation, and Public Property | 11,977 | 150,563 | 18,914 | 176,651 | 20,650 | 129,530 | 19,893 | 162,317 | 8,192 | 152,814 |
| Conservation and Economic Development | 28,923 | 90,253 | 35,897 | 105,531 | 36,946 | 81,402 | 152,904 | 110,708 | 83,698 | 100,987 |
| Intergovernmental and Other | 54,035 | 12,000 | 23,933 | 8,297 | 21,831 | 3,602 | 45,631 | 3,653 | 25,065 | 19,000 |
| Capital Outlay/ Interest | 391,800 | 2,500 | 1,169,654 | 76,842 | 183,336 | 1,634,377 | 157,920 | 191,094 | 136,131 | 120,500 |
| Total Expenditures | 2,040,807 | 2,184,643 | 2,660,279 | 2,982,716 | 4,219,631 | 4,943,695 | 2,556,311 | 3,865,780 | 3,273,952 | 4,874,785 |
| Per Capita | 367.71 | 241.40 | 475.05 | 310.70 | 727.52 | 475.35 | 436.98 | 342.10 | 541.15 | 361.09 |

Source: Paul Nelson, Inc., 1984b; USDI, BLM, 1985c.

[a] 1984 Millard County budget estimate.

## TABLE 2-6

### Comparison of Revenues and Expenditures in Delta and Nephi, Utah, 1980-84[a]

| | 1980 | 1981 | 1982 | 1983 | 1984 |
|---|---|---|---|---|---|
| REVENUES | | | | | |
| Delta | $325,146 | 584,345 | $665,885 | $946,821 | $2,025,178 |
| Per Capita | 168.47 | -- | 275.04 | 280.45 | 432.17 |
| Nephi | 590,385 | 1,547,436 | 984,941 | 894,676 | 1,328,123 |
| Per Capita | 179.72 | -- | 285.90 | 251.03 | 351.73 |
| EXPENDITURES | | | | | |
| Delta | $359,231 | 474,425 | $805,856 | $882,719 | $1,753,917 |
| Per Capita | 186.13 | -- | 332.86 | 261.47 | 374.29 |
| Nephi | 528,632 | 1,700,838 | 1,524,284 | 721,295 | 1,142,420 |
| Per Capita | 160.92 | -- | 442.46 | 202.38 | 302.54 |

Source: Paul Nelson, 1985c; USDI, BLM, 1985c.

[a] Fiscal Year Ending June 30, 1981-84.

## TABLE 2-8

### Estimated Ranch Operation Dependency on BLM Public Lands

| Ranch Operation Category | Ranch Operation Number* | Ranch Operation Percentage | Percent Dependency 1-20 | 21-40 | 41-60 | 61-80 | 81-100 | Ave. % Dependency |
|---|---|---|---|---|---|---|---|---|
| I. Cattle | | | | | | | | |
| Small (1-99 ) | 89 | 60 | 1 (1) | 10 (11) | 13 (15) | 2 (2) | 63 (71) | 83 |
| Medium (100-499) | 55 | 37 | 1 (2) | 7 (13) | 7 (13) | 4 (7) | 36 (65) | 77 |
| Large (500 and up) | 4 | 3 | -- | -- | -- | -- | 4 (100) | 97 |
| Total | 148 | 100 | | | | | | |
| II. Sheep | | | | | | | | |
| Small (1-2,000) | 16 | 42 | -- | -- | 2 (13) | 2 (13) | 12 (74) | 85 |
| Medium (2,001-4,500) | 21 | 55 | 2 (10) | -- | 1 (5) | -- | 18 (85) | 85 |
| Large (4,501 and up) | 1 | 3 | -- | -- | -- | -- | 1 (100) | 88 |
| Total | 38 | 100 | | | | | | |

*Includes five dual operations.

TABLE 2-9

Costs and Returns by Herd/Flock Size
for Livestock Operators--1982
House Range Resource Area

| Herd Sizes | (1) Gross Sales | (2) Cash Costs | (3) Regurns Above Cast Costs (1-2) | (4) Returns Above Cash Costs and Family Labor | (5) Return to Total Investment |
|---|---|---|---|---|---|
| Cattle | | | | | |
| 0-99 Cows[a] | $10,017 | $8,126 | $1,891 | -$747 | [b]-$2,904 |
| 100-499 Cows[c] | 39,960 | 37,099 | 2,861 | -3,469 | [b]-8,162 |
| 500 or more[d] | 165,361 | 139,532 | 25,829 | 11,059 | [b]-12,925 |
| Sheep | | | | | |
| All sizes[e] | 164,977 | 96,544 | 68,433 | 54,929 | [f]36,898 |

Source: USDA, Economic Research Service, 1985.

[a] Based on 48 cows bred, January inventory.

[b] Return above cash costs and family labor minus capital replacement.

[c] Based on 196 cows bred, January inventory.

[d] Based on 831 cows bred, January inventory.

[e] Based on 2,953 ewes lambed.

[f] Return above cash costs and family labor minus depreciation.

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### TABLE 2-10

### Economic Assessment of Affected Livestock Operations By Size

| Representative Range Size (AUs)[a] | | From[b] Preference | From[b] Average License Use |
|---|---|---|---|
| Mean Percent Change in Livestock AUMs | | | |
| Initial Adjustment | | | |
| Cattle: | 48 | -48 | -4 |
| | 196 | -41 | -5 |
| | 831 | -20 | -18 |
| Sheep: | 2,953 | -16 | -39 |
| Long-Term Allocation | | | |
| Cattle: | 48 | [c]+71 | +91 |
| | 196 | [c]+79 | +91 |
| | 831 | [c]117 | +97 |
| Sheep: | 2,953 | [d]+53 | +98 |
| Estimated Net Ranch Cash Income After Initial Adjustments | | | |
| Cattle: | 48 | [e]$200 | $1,300 |
| | 196 | [e]3,200 | 3,000 |
| | 831 | [e]20,000 | 19,900 |
| Sheep: | 2,953 | [e]$53,000 | $53,000 |
| Estimated Net Ranch Cash Income After Long-Term Allocation | | | |
| Cattle: | 48 | [c]$1,300 | $4,000 |
| | 196 | [c]7,300 | 7,400 |
| | 831 | [c]37,500 | 40,600 |
| Sheep: | 2,953 | [c]$173,700 | $130,800 |

[a] Based on average herd size for small, medium, and large operations. See Appendices 2 to 5.

[b] Same as Alterantive A, Effect of possible adjustments within 5-year period reflected for 39 affected allotments.

[c] From proposed adjustment levels rather than preference.

[d] Indicated from allotments receiving vegetation manipulation.

[e] Assumes base herd of affected allotments at preference.

fisherman day, the value of these days was $294,000.00. It is not known how much of this money made its way into the local economy.

## ADMINISTRATIVE FEATURES

The overall management must guide the multiple-use management of all actions and resources—including those which were not issues related or addressed in this plan. Those lands, resources, and programs not affected by the resolution of any issue or management concern would be managed in the future as they are at present (i.e., where no problem was identified that needed corrective action, no action has been prescribed).

Any future changes in management situation not addressed in the plan would be permitted on a case-by-case basis, in accordance with applicable laws, regulations, and policies.

WSAs will continue to be managed under BLM's Wilderness Interim Management Policy (IMP), until Congress makes a decision as to their designation. Any decision to designate wilderness in the HRRA would constitute a plan amendment.

Lands actions, such as Project BOLD, will be resolved by legislative action and are not addressed in this plan.

Specific range improvement projects are not proposed for each individual allotment at this level of planning. Allotments that require priority management attention have been identified and a program has been outlined to reach the management objectives for the three categories of allotments. Site-specific range improvement project planning will take place during AMP preparation.

## STANDARD DESIGN, CONSTRUCTION, AND OPERATION FEATURES

The following protective measures will be required as standard procedures:

1. Existing access will be used to protect sites where possible. Soil disturbance at all projects will be held to a minimum.
2. No vegetation clearing of project sites will be allowed except as authorized by the appropriate Federal official.
3. If necessary, disturbed areas will be reseeded to provide ground cover and minimize soil losses.
4. Site factors, such as slope, precipitation, exposure, soil depth, seeding suitability, and erosion hazard will be criteria used in selecting sites for land treatments.
5. A survey of potential habitat for threatened and endangered (T&E) species (including any sensitive species under consideration for formal designation as T&E) will be made prior to taking any action that could affect these species. Should BLM determine that there might be an effect on listed species, formal consultation with the Fish and Wildlife Service will be initiated.
6. Cultural surveys and clearances will be required for all project sites (as specified in BLM Manual 8111.14) prior to new construction. BLM has entered into a memorandum of understanding with the Utah State Historic Preservation Officer regarding protection of cultural resources.
7. Water developments will be periodically inspected to ensure that they remain in usable condition. Preventive maintenance will be performed as needed. Cooperative agreements with rangeland users will be solicited by BLM for rangeland improvements, and these agreements will outline specific project maintenance responsibilities.
8. When possible, water for wildlife will be maintained throughout the year at established watering facilities.

9. The appropriate Federal officials will be notified if paleontological remains are encountered during any land treatment or construction activities. Recovery, protection, and preservation measures will be implemented, as necessary, to mitigate adverse impacts.

10. Prior to development of projects, provision of the Memorandum of Understanding of April 1, 1979 between the BLM, Forest Service, Utah Division of Wildlife Resources, and Soil Conservation Service and the master Memorandum of Understanding between BLM and Utah Division of Wildlife Resources of June 1979 will be met. These memoranda provide for coordination in the development and establishment of guidelines for buffer zones for water and other developments.

11. All range improvements will be designed and constructed in such a manner so as to minimize environmental impact while maximizing function and cost effectiveness. Prior to the installation of any of the range improvements an environmental assessment (EA) will be prepared analyzing the alternatives for the development. In addition a benefit/cost analysis of the various alternatives will be completed to determine the most cost effective format for each range improvement. The EA and cost/benefit analysis will then be used to assist in the development of the final project design.

12. Wildlife escape devices will be installed and maintained in all water troughs.

13. All areas where land treatments are proposed will be totally rested from livestock grazing for a period necessary to allow for the recovery and re-establishment of key forage species. The minimum requirement will be to rest for one full growing season and until seed ripening time for the following season.

14. Vegetation treatment projects will be designed in irregular patterns creating an "edge" effect, with islands of vegetation left intact for wildlife cover. All land treatment projects on crucial wildlife ranges will be limited in size, where necessary, by the cover requirements of wildlife. Proper mitigation measures will be incorporated.

15. Consultation with the affected interest groups will be required before any vegetation treatment project is initiated.

16. Chemical treatment will consist of applying approved chemicals to control noxious or poisonous plants. Before chemicals are applied, the BLM will comply with the Department of the Interior regulations. All chemical applications will be carried out in compliance with the State pesticide laws of Utah.

17. No range improvement project will be authorized in riparian areas, unless it will maintain or improve riparian habitat.

# VEGETATION AND RANGE

## Introduction

### VEGETATION DISTRIBUTION AND HISTORIC USE

The HRRA is divided into two rather distinct geographical and ecological regions. The lower elevation basins and playas of the western region (Topaz Unit) are primarily dominated by cold desert shrub communities, including a vast component of saltbush and greasewood plant associations. As elevation increases in the eastern region (Tintic Unit), the basin shrub communities give way to sagebrush steppe vegetation intermixed with stands of pinyon-juniper on the rockier mountainous terrains. Pinyon-juniper communities dominate the mountains of the eastern unit until the wet, upland sites and north exposures are reached, where mountain shrubs, aspen, and a variety of conifers become the dominant species.

Despite what appears as a consistent vegetation trend from the western desert to the mountainous extremes of the east, many environmental and man-induced factors have led to great diversity in both areas. For example, the western desert is strongly influenced by the major topographic swells of the Deep Creek, Fish Springs and House Range mountains. These ranges, particularly the Deep Creek Mountains, contain a diverse flora from a variety of rock strata, slope, aspect, and elevational conditions that are brought to prominence above the desert floor. The western desert is also a region of complex edaphic (soil) conditions, left from the influences of Lake Bonneville, that have played a major role in the distribution and composition of the desert salt shrub communities. A final important factor, influencing the West Desert communities, is the introduction of livestock (primarily sheep) within the last 140 years. To some extent, winter sheep use has affected the structure of the desert plant communities by favoring an increase in the grass (herbaceous forage) component over the shrub component, which is more heavily utilized as a source of winter forage.

As with the West Desert communities, the vegetation of the eastern semidesert/mountain region has been influenced by a number of unique environmental variables. The presence of wild fires has played a major role in the successional development of several vegetation types, particularly pinyon-juniper stands where fuel loads are most extensive and continuous. The Little Sahara sand dunes is another prominent example of a controlling environmental element in this region. This area is a vast collection of aeolian sand deposits that support only sparse plant communities (ones that must contend with abrasive winds and a shifting substrate).

In addition to the natural phenomena characteristic of the eastern portion of the resource area, the influences of man are also readily apparent in the vegetation communities. A management priority in this region has been to provide and improve early spring forage for cattle through the mechanical removal or prescribed burning of sagebrush and pinyon-juniper overstories, followed by reseeding. Many projects have been very successful in terms of benefits to livestock and wildlife, particularly in establishing hardy introduced early spring grasses, such as crested wheatgrass (*Agropyron desertorum*), pubescent wheatgrass (*Agropyron tricophorum*), and Russian wildrye (*Elymus junceus*). Despite these successes, opening up "closed" vegetation communities for the expansion of off-road vehicle (ORV) use into these areas.

In summary, the distribution of vegetation communities throughout the HRRA does follow a consistent topographic and geographic trend, varying from a western desert biome to a semidesert/upland biome. Yet, both the west and eastern regions contain diverse environmental elements and a very different set of man-induced uses, impacts, and management priorities.

### MAJOR VEGETATION TYPES

Much of the available information on the specific mapping of vegetation types in the resource area has been conducted by range personnel using ocular reconnaissance survey methods. However, vegetation type boundaries have been modified and refined within the last 5 years, based on recent information gathered from 3rd and 4th Order Soil Surveys and the Rangeland Value Inventory and Monitoring System (RVIMS) (a procedure developed in the HRRA [Appendix 1]). Table 2-11 summarizes the major vegetation types as represented in the resource area.

As shown in Table 2-11, the prominent salt desert types (saltbush, greasewood, and desert shrub) account for nearly 54 percent of the total vegetation cover in the resource area. These important desert communities provide key forage for livestock in the winter and big game animals year round. The majority of forage used by these herbivores are shrubs and half-shrubs of the Goosefoot family (*Chenopodiaceae*) and Composite family (*Asteraceae*).

TABLE 2-11

House Range Resource Area Major Vegetation Types

| Type | Topaz (Western Desert) (acres) | Tintic (Eastern Semi-Desert Upland) (acres) | Total (acres) | Percent |
|---|---|---|---|---|
| 1. Grassland (perennial) | 70,097 | 57,800 | 127,897 | 5.7 |
| 2. Sagebrush | 289,561 | 220,520 | 510,081 | 22.7 |
| 3. Mountain Shrub | 1,088 | 9,910 | 10,998 | 0.5 |
| 4. Conifer | 10,300 | | 10,300 | 0.5 |
| 5. Pinyon-Juniper | 40,910 | 61,100 | 102,010 | 4.5 |
| 6. Aspen | 1,190 | | 1,190 | 0.1 |
| 7. Saltbush | 861,073 | 8,713 | 869,786 | 38.7 |
| 8. Greasewood | 193,644 | 18,952 | 212,596 | 9.5 |
| 9. Desert Shrub | 123,499 | | 123,499 | 5.5 |
| 10. Annuals (grasses and forbs) | 21,035 | 19,425 | 40,460 | 1.8 |
| Rough and Inaccessible | 64,718 | 31,939 | 96,657 | 4.3 |
| Waste | 107,741 | 15,896 | 123,637 | 5.5 |
| Unclassified[a] | 5,033 | 11,200 | 16,203 | 0.7 |
| Totals | 1,789,859 | 455,455 | 2,245,314 | 100.0 |

[a] The unclassified category represents areas that are primarily covered by water (i.e., intermittent lake beds) or areas that are unallotted for livestock grazing.

Desert Shrub Vegetation

Another prominent group of vegetation types is the sagebrush types which, collectively, cover nearly 23 percent of the resource area. The two sagebrush types that dominate the West Desert are black sagebrush (*Artemesia arbuscula nova*) and bud sagebrush (*Artemesia spinescens*). Both sagebrush types are found in association with salt desert shrub species and are highly palatable to nearly all classes of herbivores. The eastern foothill region of the resource area is dominated by several varieties of big sagebrush (*Artemesia tridentata*). Usually, big sagebrush stands are found on well-developed soils that can sustain a vigorous understory of herbaceous (grass and forb) species, used by herbivores as spring/summer forage.

The third major vegetation type is pinyon-juniper, often found on rockier mountain sites. The pinyon-juniper type (shown in Table 2-11) actually represents much more than the 4.5 percent of the total vegetation composition. This is apparent because most of the rough and inaccessible areas shown are covered with juniper, and at least 50 percent of the sagebrush type has more than 10 percent composition of juniper trees present. The pinyon-juniper woodlands are often dominated by Utah juniper (*Juniperus osteosperma*) on the drier sites, which may comprise 80 percent or more of the overstory species. However, on the wetter sites, pinyon pines may form nearly pure stands as the dominant species. The most common pinyon species encountered in the eastern foothill region of the area is *Pinus edulis*, while the mountain ranges of the West Desert contain singleleaf pinyon (*Pinus monophylla*), an endemic species of the Great Basin Region.

A diverse group of riparian vegetation communities is not shown as a major vegetation type in Table 2-11. Although perennial streamside and wetland vegetation types account for less than 0.1 of 1 percent of the total land coverage (approximately 2,500 acres), they are recognized as an important ecological component of the local environment and are discussed in more detail in the Wildlife section as a habitat type.

### PLANT SPECIES AND ABUNDANCE

Individual plant species data are collected and analyzed on permanent transects located throughout the resource area, using the methods described in RVIMS (Appendix 1). Presently, 370 permanent transects (333 on native range and 37 on seedings) are located throughout the major vegetation communities.

Information summarized from the RVIMS transects indicates that there are 50 plant species (listed in Appendix 6) most commonly encountered in the area. On native ranges, shadscale (*Atriplex confertifolia*) is the most dominant shrub species, in terms of its presence in nearly all of the expansive West Desert vegetation communities. Cheatgrass (*Bromus tectorum*) is the most widespread species overall and one of the most abundant; the major annual to be found in nearly all vegetation types. Big sagebrush and a variety of rabbitbrush species (*Chrysothamnus* spp.) are also well represented as dominant or subdominant species in many of the plant communities. Figures 2-1 and 2-2 show the relative abundance of these and other plant species as summarized from the 370 permanent RVIMS transects.

## THREATENED, ENDANGERED, AND SENSITIVE PLANT SPECIES

Presently, there have been no federally-listed T&E plant species found and verified in the HRRA. See Appendix 7 for consultation letters received from FWS. Purple-spined hedgehog cactus (*Echinocereus engelmannii* var. *purpureus*) is a federally-listed endangered species that has been reported in Millard County, although reports have not been verified.

Four plant species have been found in the resource area that are considered as sensitive by BLM since they are undergoing candidate status review as endangered by the U.S. Fish and Wildlife Service (FWS). These species are current milkvetch (*Astragalus uncialis*), Tidestrom beardtongue (*Penstemon tidestromii*), Deep Creek Mountain stickweed (*Hackelia ibapensis*), and giant four-wing saltbush (*Atriplex cansens* var. *gigantea*). These sensitive species, their current status, and identified habitat are shown in Table 2-12.

Also shown in Table 2-12 are other endangered and sensitive plants located in adjacent counties and resource areas. These plants may or may not occur in the HRRA.

Under present policy, all Federal candidate and T&E plant species are afforded the full protection of the Endangered Species Act.

## ENDEMIC PLANT SPECIES

In addition to T&E plant species, there are also a variety of plant species endemic to the Great Basin area, particularly to the West Desert mountain ranges. The Deep Creek Mountains contain the greatest diversity of endemic plants that are apparently quite rare, although not listed as T&E or sensitive at this time. A partial listing of those occurring in the Deep Creek Range (Welsh, 1978) include: defective milkvetch (*Astragalus calycosus* var. *mancus*), rock Indian paintbrush (*Castilleja lapidicola*), spurred lupine (*Lupinus arbustus*), and petite cholla (*Opunita pulchella*). In addition to these species, a previously unknown member of the mustard (*Brassicaceae*) family has recently been collected in the Deep Creek Range. It is in the genus *Draba* and is presently undergoing taxonomic study/classification.

## ECOLOGICALLY UNIQUE AREAS

The Deep Creek Mountains are considered ecologically unique due to their isolation and presence of endemic species. There is another area in the HRRA that qualifies as "ecologically unique or distinct." This is the Rockwell Natural Area, presently under consideration for special designation as part of the Little Sahara Recreation Area.

The immense sand dunes in this area have developed a unique associated ecology, in response to this specialized homogenous landform material. The most conspicuous plant growing on the dunes is the giant four-wing saltbush, *Atriplex canesens* var. *gigantia* (recently listed as a sensitive species). It frequently grows to a height of 8 to 10 feet and 10 to 15 feet across. This giant form of four-wing is found nowhere else in the world. It appears to be the last remaining relic of a once wide-spread population which has now become extinct everywhere except on this sand dune island.

## POISONOUS PLANT AND NOXIOUS WEED SPECIES

Although poisonous plant species are widespread throughout the resource area, few occur in sufficient concentrations to seriously threaten livestock or wildlife. Halogeton (*Halogeton glomeratus*) is the most prevalent species found in many of the shadscale plant communities of the West Desert. In the past 25-40 years, this plant has caused substantial losses among grazing sheep on winter/spring ranges until operators learned to manage and use the range more effectively. The only other noxious plant known to cause livestock poisoning in the resource area is a variety of larkspur species, particularly *Delphinium andersonii* in the Deep Creek Mountains. These plants are highly toxic to cattle during late spring/early summer on higher elevation ranges; consequently, grazing is usually deferred on these ranges until mid-summer.

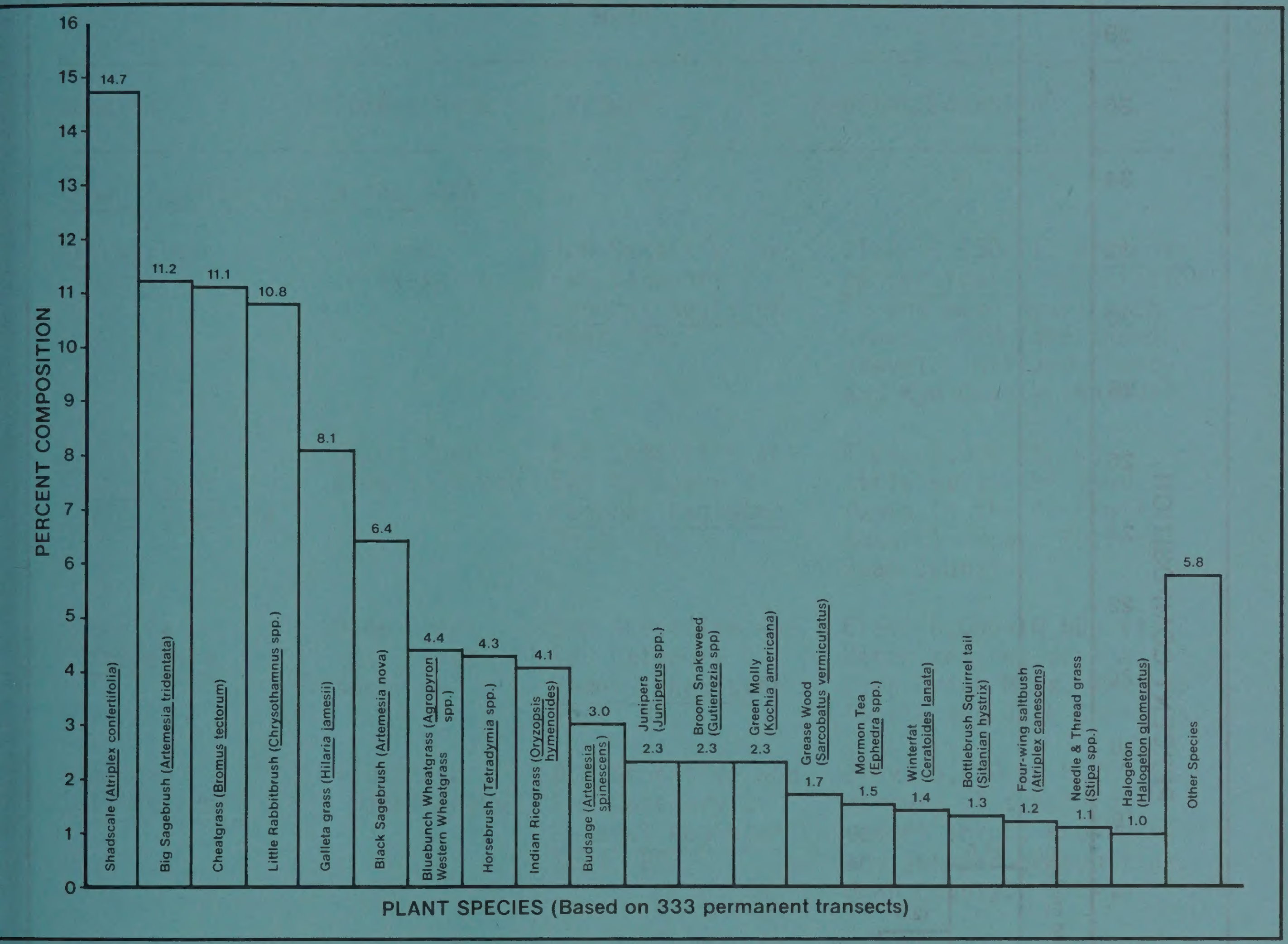


**FIGURE 2- 1**

**PLANT COMPOSITION FOR HOUSE RANGE RESOURCE AREA (Relative Abundance - Native Range Plants)**

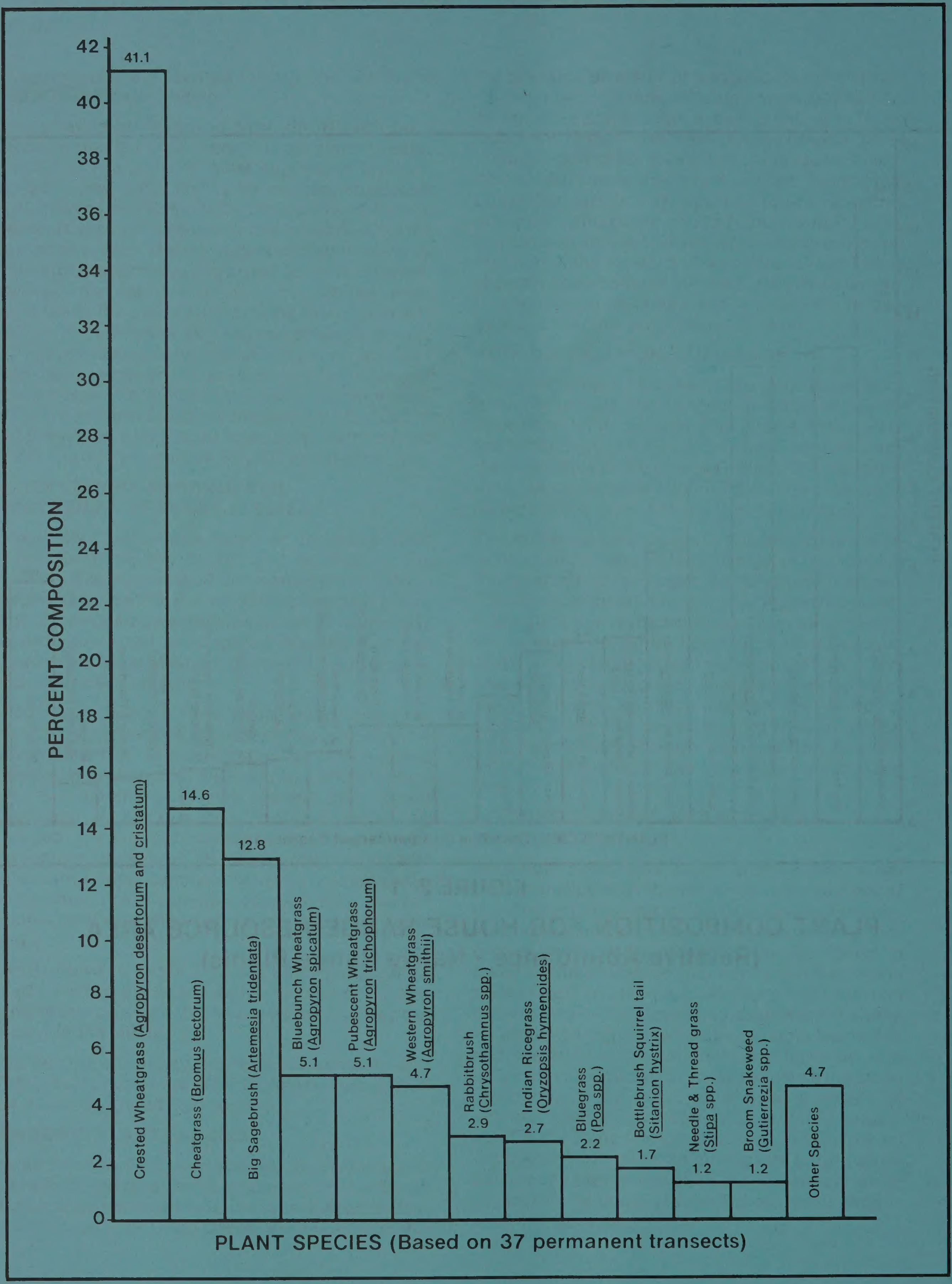


FIGURE 2- 2

PLANT COMPOSITION FOR HOUSE RANGE RESOURCE AREA
(Relative Abundance - Seeding Treatment Areas)

TABLE 2-12

Threatened, Endangered, and Sensitive Plant Species
HRRA

| Species | Common Name | Status[a] | Habitat/Location[b] |
|---|---|---|---|
| Known Populations in the HRRA | | | |
| Astragalus uncialis | Current milk-vetch | BLM Sensitive and FWS Category 2 Federal Register Sept. 85. | Elev. 4,650 ft. Atriplex concertifolia Association in and near small wash areas. Old lake shores, gravel. Millard County and Nye County (Nevada). |
| Atriplex canescens var. gigantea | Giant four-wing saltbush | BLM Sensitive and FWS Category 2 Federal Register Sept. 85. | Elev. 5,000 ft. Restricted to the sand dunes in the Rockwell Natural Area. Eastern Juab County. |
| Hackelia ibapensis | Deep Creek Mt. stickseed | BLM Sensitive and FWS Category 2 Federal Register Sept. 85. | Elev. 8,000-10,500 ft. Upper reaches of the Deep Creek Mtns. Western Tooele and Juab Counties. |
| Penstemon tidestromii | Tidestrom beardtongue | BLM Sensitive and FWS Category 2 Federal Register Sept. 85 | Elev. 5,600 to 8,200 ft. variety of substates, desert shrub, snowberry and juniper communities. Juab County. |
| Known Population in Adjacent Resource Areas/Counties That May Occur in HRRA: | | | |
| Cryptantha compacta | Compact catseye | BLM Sensitive and FWS Category 2 Federal Register Sept. 85. | Elev. 5,000 to 6,500 ft.; Sevy Dolomite Formation gravelly loam, open slopes and ridges, outcropping covered with shallow soil layer; desert shrub and grassland community. Millard County. |
| Eriogonum ammophilum | Sand-loving buckwheat | BLM Sensitive and FWS Category 1 Federal Register Sept. 85. | Elev. 5,270 ft. Quaternary Alluvium, sandy soil; mountain shrub community. Millard County. |

TABLE 2-12 (concluded)

| Species | Common Name | Status[a] | Habitat/Location[b] |
|---|---|---|---|
| *Penstemon concinnus* | Tunnel spring beardtongue | BLM Sensitive and FWS Category 2 *Federal Register* Sept. 85. | Elev. 5,500 to 7,500 ft.; Sevy Dolomite Formation, gravelly soil; pinyon-juniper woodland. Beaver and Millard counties. |
| *Sphaeralcea caespitosa* | Jones globe mallow | BLM Sensitive and FWS Category 2 *Federal Register* Sept. 85. | Elev. 5,000 to 6,500 ft.; Sevy Dolomite, rocky calcareous soil, mixed shrub, pinyon-juniper, and grass community. Beaver and Millard counties. |
| *Frasera gypsicola* | Green gentiar | BLM Sensitive and FWS Category 1 *Federal Register* Sept. 85. | No information available. |

New Species Not Yet Classified:

A new plant species *Primula domensis* has recently been discovered in the San Francisco Mountains, south of the HRRA. As more data becomes available, it may be identified as a Candidate Review or Threatened or Endangered species in the near future.

Note: FWS Category 1--Plant species for which there is substantial data to support a recommendation as endangered.

FWS Category 2--Plant species in which more data is needed to make a biological assessment as endangered.

[a] USDI, FWS, Sept. 27, 1985.

[b] Welsh and Thorne, 1979.

The invasion of noxious weeds in the resource area within recent years is of greater concern than poisonous plant infestations. A species of major concern is squarrosa knapweed (*Centaurea squarrosa*). Detected as early as the 1950s (Holmgren, 1958), this introduced perennial weed has become a serious pest in cultivated fields and native ranges throughout eastern Juab County. Eradication of this species, through prescribed burning and intensified grazing management practices, has been largely unsuccessful. A coordinated management program between all local, State, and Federal agencies is needed to control or eradicate knapweed. Information is presently being collected regarding the distribution of this species.

Other noxious weeds, of recent concern in the area, include two species of thistle, musk thistle (*Carduus nutans*) and Scotch thistle (*Onopordum acanthium*). These species, along with their close relative bull thistle (*Cirsium vulgare*), have escaped from cultivated fields and road sides to public ranges in the eastern extremes of Juab and Millard counties. Once entrenched, these species are difficult to remove, particularly from riparian vegetation communities where there is ample water and usually well-developed soils.

### GRAZING PERMITS AND LICENSING

Presently, 197 permittees graze livestock on 2,197,937 acres of public rangeland in the resource area. This represents 98 percent of the resource area within allotment boundaries, although far less is actually grazed due to waste areas, rough inaccessible slopes, and limited water supplies.

Of the 197 permittees, 158 have cattle permits (either yearling or cow/calf), 34 have sheep permits, and 5 dual use permits (sheep and cattle). Fifty-one permittees have more than one allotment, while 35 have permits/allotments in other districts/resource areas.

The relatively large number of permittees (197) is primarily the result of many, small cattle ranches based in the Tintic (eastern) foothill region of the resource area. Many farm or ranch units are portions of a traditional, larger family operation; therefore, the operators often run their livestock in common on the public range. The accounting and administering of these operations is a comprehensive task, whereby over 400 billings/use authorizations are issued annually.

Figure 2-3 shows the changes in livestock use expected to occur should the proposal be implemented.

### GRAZING ALLOTMENTS

At the present time, 101 allotments are in the resource area (see Figure 2-4 and Appendix 8). Portions of six allotments (i.e., Table Mountain, Death Canyon, Sheep Rock, Maple Peak, Kimball Creek, and West Mona allotments) are in the Salt Lake District. Portions of two allotments (Black Rock and Fandangle) are in the resource area but are administered and managed by the Salt Lake District. Three allotments, along the Nevada border (Marble Wash, Warm Creek, and Devils Gate), are managed by the Ely District in Nevada. The BLM cooperatively manages the Wringer Canyon Allotment for the Fishlake National Forest, Fillmore Ranger District, in accordance with the Dust Bowl Allotment Management Plan (AMP).

From the total of 101 allotments, 57 are individual allotments, while 44 are common use allotments. Sixty-six cattle allotments, 26 sheep allotments, and nine dual use (cattle and sheep allotments) are in the resource area.

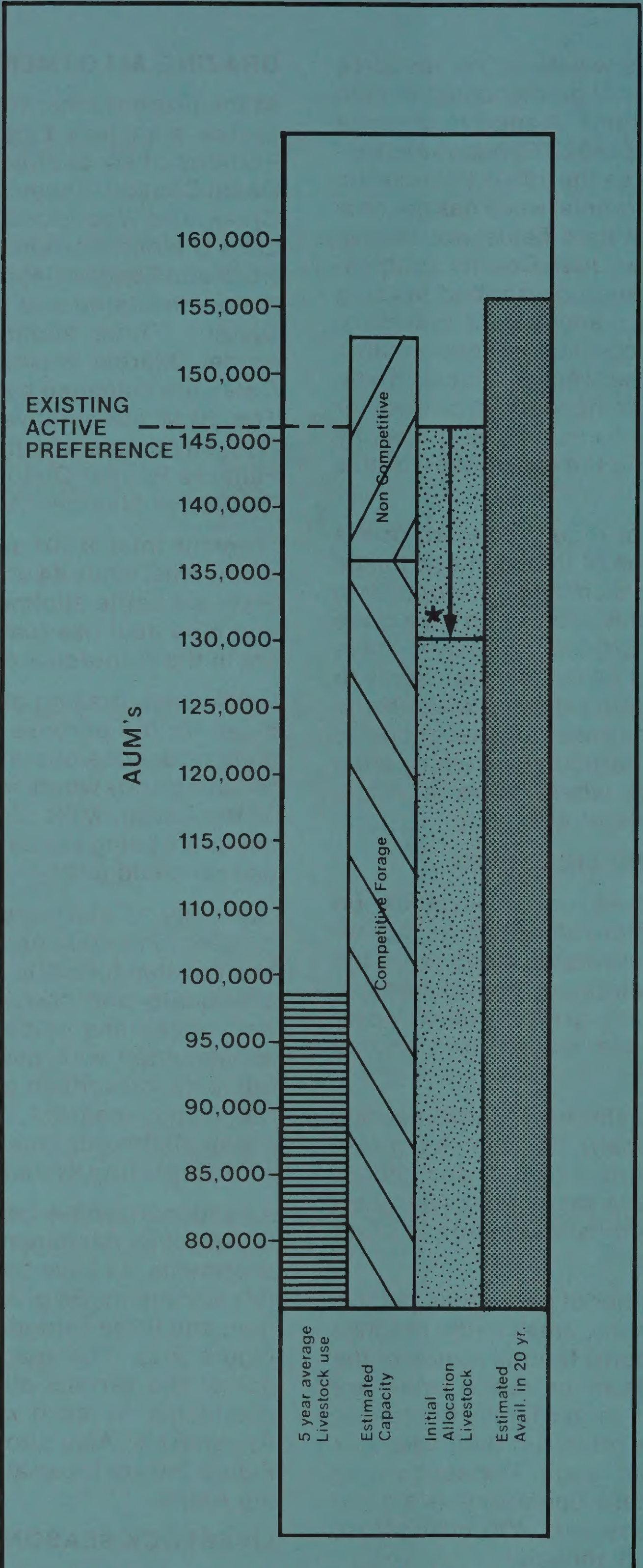
In the past, grazing allotments have been combined for the purpose of consolidating management under one operator or group of compatible ranching units where feasible. Presently, portions of the Levan, Mills, Juab, and Dust Bowl allotments are being evaluated for consolidation under one ranching unit.

Currently, 16 AMPs are in various stages of development in the resource area. Twelve AMPs have been written for cattle allotments, three for sheep allotments, and one AMP for an allotment with both sheep and cattle. Most AMPs are partially implemented with pasture fences, water developments, prescribed grazing systems, and some rangeland seedings completed. Only the two sheep allotments lack any developments or prescribed grazing systems.

All allotments have been categorized into the M I C Selective Management system. Of the 101 allotments, 44 have been placed as Maintenance (M) allotments, 54 given the Improve (I) designation, and three categorized as Custodial (C) (see Figure 2-5). The specific criteria used to categorize the various allotments and a list of the allotments in each category are provided in Appendix 8. Also shown in Appendix 8 and on Figure 2-6 are those allotments which have existing AMPs.

### LIVESTOCK SEASON OF USE

Although livestock operations can fluctuate dramatically, it is estimated that nearly 13,000 cattle and over 101,000 sheep are grazed on the public ranges in the resource area annually. Most grazing use occurs in the West Desert (Topaz) during



*Estimated stocking level within five years of plan completion, contingent upon monitoring studies.

FIGURE 2- 3
CHANGES IN LIVESTOCK USE LEVELS

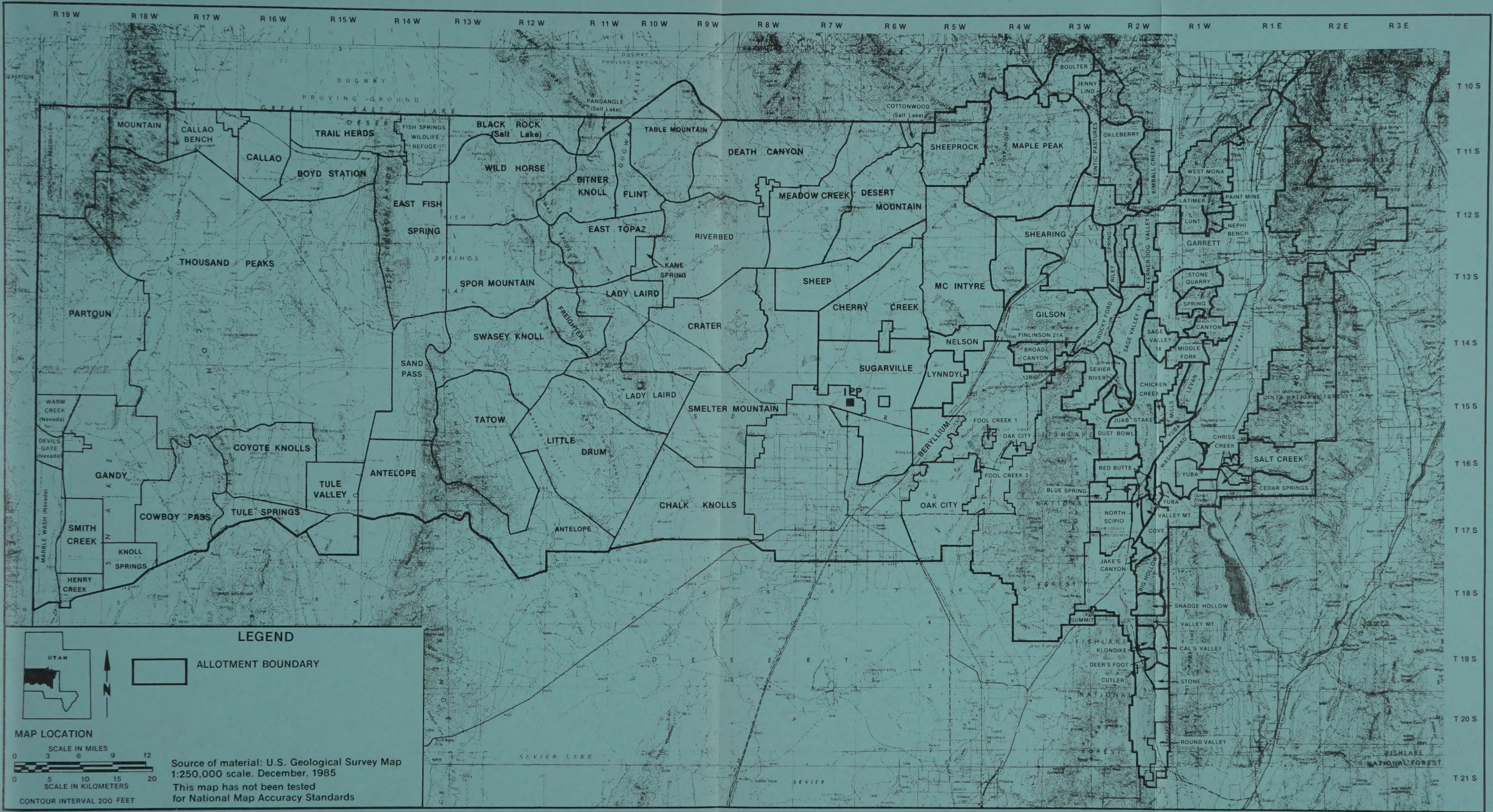


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FIGURE 2- 4

HOUSE RANGE RESOURCE AREA GRAZING ALLOTMENTS

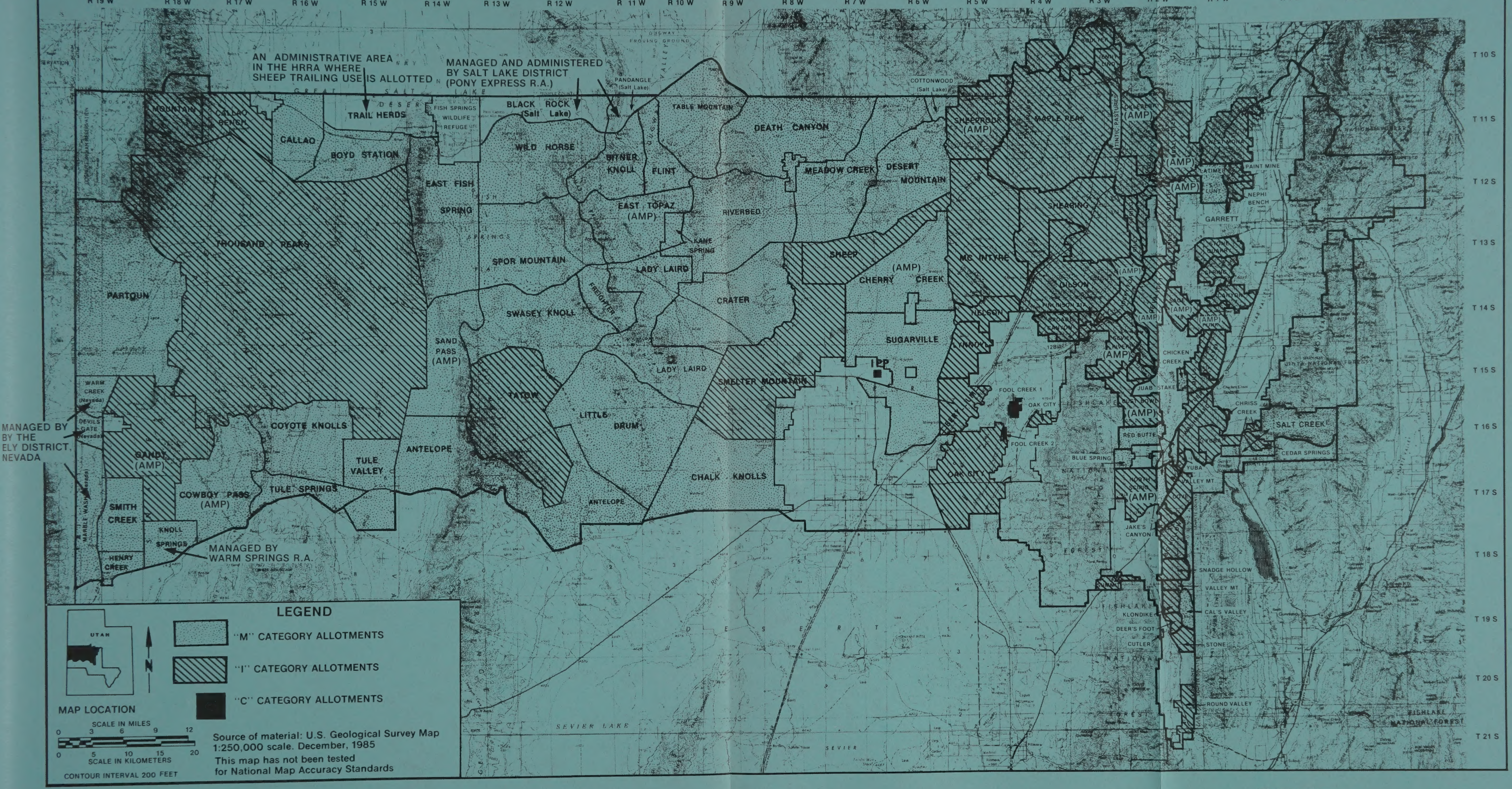

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FIGURE 2- 5

HOUSE RANGE RESOURCE AREA GRAZING ALLOTMENTS INCLUDING MANAGEMENT CATEGORIES

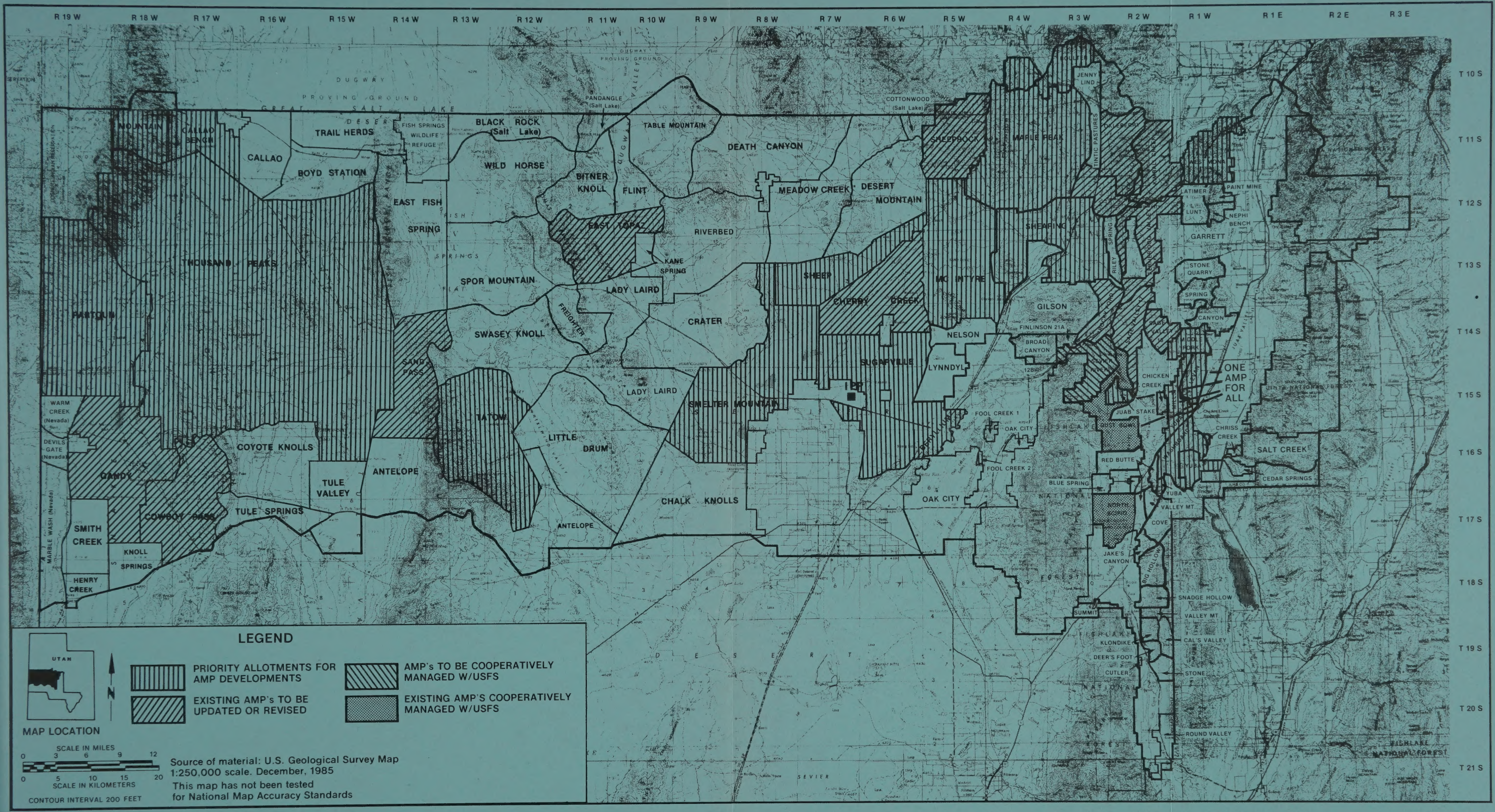

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FIGURE 2- 6

PRIORITY ALLOTMENTS FOR AMP DEVELOPMENT

the winter and early spring months by sheep and in the eastern foothills during the spring/summer/fall months by cattle. Figure 2-7 shows the approximate percentages of livestock use by season in the resource area. Depicted in Appendix 8 are the existing seasons of use in each allotment for both domestic livestock and big game species.

### LIVESTOCK TRAILING

There are numerous established livestock trailing routes in the area. The majority are sheep routes that lead east-west across the desert to the foothill divides. Depending on the sheep destination and route, trail widths are designated up to 1 mile wide. The majority of sheep trailing is accomplished within a few days to a week, although some extended routes may be authorized for as much as 20 days.

In recent years, the practice of trailing sheep has substantially diminished. Many operators use trucks in order to decrease time, reduce injuries and losses, and improve efficiency, particularly when moving to lambing grounds and shearing pens.

### FORAGE DEMAND AND ESTIMATED CARRYING CAPACITY

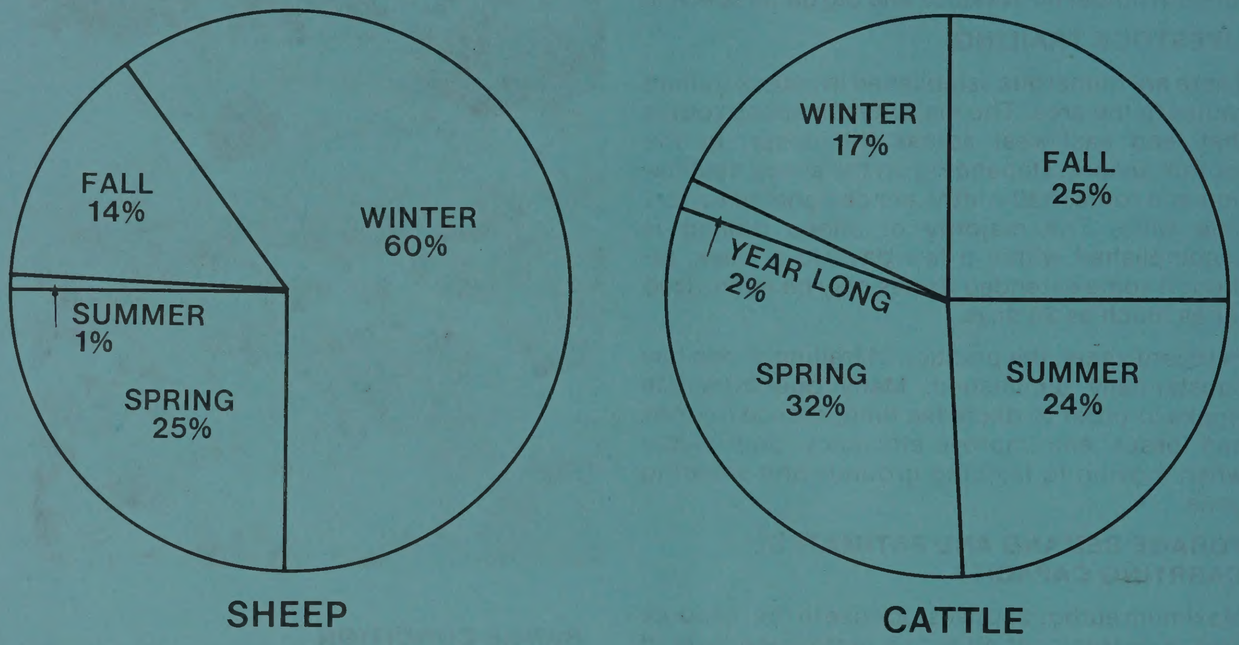
Maximum authorized livestock use in the resource area is currently at an active preference level of 147,390 animal unit months (AUMs) of forage. Approximately two-thirds or 96,109 AUMs of this forage demand is allocated for sheep and one-third or 47,012 AUMs for cattle. Actual licensed use has averaged approximately 100,378 AUMs on an annual basis from 1980-1984. This represents nearly 68 percent of the total active preference for that time period. Appendix 8 shows the active preference and average actual use for each individual allotment.

Current inventory information, using occular reconnaisance and RVIMS study procedures (see Appendix 1), indicates that there are approximately 137,058 AUMs of competitive forage available to livestock, wild horses, and big game animals. It is estimated that an additional 15,016 AUMs of noncompetitive forage (forage not used by livestock) are also available to big game animals. Although the amount of this noncompetitive forage exceeds the current demand of big game animals (approximately 12,289 AUMs), it is not necessarily distributed or available in those areas of crucial big game habitat. Table 2-13 depicts the existing forage demand and estimated carrying capacities for all competing herbivores.

### RANGE CONDITION

Ecological range condition is based on the present state of vegetation of a range site in relation to the climax (natural potential) plant community for site. Specifically, it is an expression of the relative degree to which the kinds, proportions, and amounts of plants in a community resemble that of the climax community (U.S. Department of Agriculture [USDA], Soil Conservation Service [SCS], 1976). There are four ecological range condition classifications used in evaluating each range site. The percent of present plant community that is climax for the range site for each ecological range condition class is: excellent, 76-100 percent; good, 51-75 percent; fair, 26-50 percent; and poor, 0-25 percent.

In evaluating range condition, the HRRA used this ecological condition rating system, however, some modifications were made. First, ecological condition was determined for vegetation associations, which are broader topographic units and may comprise more than one range site (see Appendix 1). Secondly, the mapping of vegetation associations is tied to permanent study transects which are, in turn, established in representative "key" grazing areas for livestock. Therefore,



LIVESTOCK USE IN THE HRRA BY *SEASON

*The above charts indicate the present amount of time licensed for livestock in each season and do not reflect the numbers of animals grazing within each season.

FIGURE 2- 7

TABLE 2-13

Forage Demand and Estimated Carrying Capacity in Planning Units (AUMs)

| Condition | (Western Desert) Topaz | (Eastern Semi-Desert Upland) Tintic | Total |
|---|---|---|---|
| Active Preference | 109,588 | 37,802 | 147,390 |
| Average Licensed Use (1980-84) | 71,039 | 27,555 | 98,594 |
| Estimated Carrying Capacity (RVIMS studies and Occular Reconnaisance) | 106,055<br>[a]2,904 | 31,003 | 137,058<br>[a] 2,904<br>139,962 |
| Big Game (Non-Competitive)[b] | 2,989 | 12,027 | 15,016 |
| Big Game (Present Demand)[c] | 4,605 | 8,049 | 12,654 |

[a] Wild Horses--2,904 AUMs is the present estimated carrying capacity for wild horses in the Confusion and Swasey HMAs. This capacity exceeds the 2,580 AUMs necessary to sustain manageable herds as described in the Wild Horse section.

[b] Big Game (Non-Competitive)--AUMs of forage that is not used by livestock but is available and useable to big game animals.

[c] Big Game (Present Demand)--AUMs of forage currently necessary to sustain big game populations at existing estimated levels.

these mapped units are not only represented by a distinctive vegetation association but established grazing use patterns as well. By establishing permanent study transects (RVIMS) in these mapped areas, objectives may be developed to evaluate existing conditions or changes to those conditions based on livestock use.

Using the above criteria, range condition has been determined for all 101 grazing allotments, shown in Appendix 8. Presented in Table 2-14 is the overall summary of range condition for both planning units and the resource area as a whole.

**TABLE 2-14**
**Range Condition**
**(Based on Ecological Site Information)**

| Condition | (Western Desert) Topaz | (Eastern Semi-Desert Upland) Tintic | Total | Percent |
|---|---|---|---|---|
| Excellent | 128,763 | 18,006 | 146,769 | 6.7 |
| Good | 702,471 | 230,442 | 932,913 | 42.4 |
| Fair | 645,891 | 51,770 | 697,661 | 31.7 |
| Poor | 120,504 | 8,468 | 128,972 | 5.9 |
| Other[1] | 156,103 | 135,519 | 291,622 | 13.3 |
| Total | 1,753,732 | 444,205 | 2,197,937 | 100.0 |

[1] The "Other" category represents areas that may be rough and inaccessible, contain sparse vegetation, treatment areas, or have not been classified.

## RANGE TREND

Essentially, range trend is an estimate of whether current range condition is improving, declining, or remaining static, based on current livestock management practices. Many trend studies conducted to date are based on observations over a short term (1 to 2 years) and are, therefore, only estimates of apparent trend. Summarized in Table 2-15 are these estimates for the planning units and resource area as a whole.

As shown in Table 2-15, the majority or 88.9 percent of the public land under grazing permit is estimated to have an apparent static trend. These apparent trend ratings have been compared to long-term trend studies established prior to 1972 and reread in 1984 on 13 allotments. Many of these long-term trend studies do not correlate directly with the estimates of apparent trend. The majority of long-term study plots indicated upward trends as compared with apparent trend readings of static for the same areas.

**TABLE 2-15**
**Apparent Range Trend**

| Trend[1] Indication | (Western Desert) Topaz (acres) | (Eastern Semi-Desert Upland) Tintic (acres) | Total Acres | Percent |
|---|---|---|---|---|
| Improving | 84,768 | 44,842 | 129,610 | 5.9 |
| Static | 1,600,756 | 353,861 | 1,954,617 | 88.9 |
| Declining | 68,208 | 45,502 | 113,710 | 5.2 |
| Total | 1,753,732 | 444,205 | 2,197,937 | 100.0 |

[1] Apparent range trend on an allotment basis is shown in Appendix 8.

Despite these discrepancies, the long-term studies do provide some valuable observations of overall range trends occurring in the resource area. In general, the study data indicate that Indian ricegrass (*Oryzopsis hymenoides*) and galleta grass (*Hilaria jamesii*) are increasing in many of the shadscale, desert shrub and desert grassland communities. Other indications from the studies show that a variety of perennial grasses, such as blue bunch wheatgrass (*Agropyron spicatum* and the variety *inerme*), needlegrass (*Stipa comata*), and western wheatgrass (*Agropyron smithii*), are increasing in many upland sites. Also, there are many consistent observations of the encroachment of several rabbitbrush (*Chrysothamnus* spp.) species, cheatgrass (*Bromus tectorum*), and juniper (*Juniperus osteosperma*) into many rangeland communities, particularly in the sagebrush and drier grassland sites.

## STRUCTURAL RANGELAND IMPROVEMENTS

### Water Developments

Stock water availability continues to be one of the major limiting factors in achieving proper livestock distribution throughout the resource area. Range suitability, based on water demand, is difficult to portray because of the availability of snow on many winter sheep allotments and the hauling of water by permittees on a seasonal basis. It is known, however, that portions of many grazing allotments (particularly cattle allotments) are underutilized or overutilized due to the lack of well-distributed water sources.

To offset these demands, water development has received priority consideration during annual project planning. Currently, 49 wells, 44 developed springs, 135 miles of pipeline, 49 reservoirs, and 13 catchments (guzzlers) provide water for livestock, wild horses, and wildlife. These improvements are widely scattered throughout the resource area, with most clustered in grazing allotments that have completed AMPs. The majority of these improvements provide reliable water, although many of the reservoirs and some springs and catchments are undependable.

In addition to the developed water projects, a number of undeveloped springs and seeps and over 58 miles of perennial streams are also available to wildlife and livestock (see Figure 2-8).

#### Fencing

It is estimated there is over 440 miles of existing fenceline on public lands in the HRRA. The majority of the fences consist of barbed wire along cattle allotment boundaries in the Tintic region and the south and western regions of the Topaz unit. Some sheep-tight woven wire fences are in the Topaz and Tintic units; however, the majority of the sheep allotments remain unfenced due to conflicts with antelope migration, economic constraints, and the control of sheep bands by herders. The unfenced winter sheep allotments have allotment boundaries that are posted or designated by topographic barriers.

### NON-STRUCTURAL RANGE IMPROVEMENTS

#### Range Seeding

Seedings have been established in many of the sagebrush and pinyon-juniper communities, following chaining, railing, or prescribed burning in these areas. The majority of these treatments have been restricted to semidesert shallow loam, upland shallow loam, and upland stony loam range sites. Success has generally been good with yield estimated to average near 650 pounds air-dry forage per acre annually. Carrying capacity for livestock is estimated to average about 4.9 acres per AUM on these treatment areas. Approximately 41,000 acres have been seeded, and about 89,000 additional acres identified that have good seeding capabilities (see Figure 2-9). These areas identified as suitable for conversion/seeding were evaluated using the following criteria: average annual precipitation, 10 inches or greater; surface texture, sandy loam to heavy clay; slope, 0 to 20 percent; acceptable soil salinity, water table, and soil temperature conditions; effective root depth, 12 inches or greater; fragments by volume gravel and cobbles, 0-30 percent; large stones and outcrops, 0-10 percent; and depth to sand, gravel, or impervious layer, 20 inches or greater.

## Elements of the Plan

### GOALS AND OBJECTIVES

1. Provide a balanced allocation of forage resources for livestock, wild horses, and big game while ensuring the protection of rangeland values and providing a stable, renewable forage base (to be accomplished within 5 years of Final RMP approval).
2. Reduce or eliminate rangeland resource problems on 32 priority allotments identified for intensive management (see Figure 2-6).
3. Maintain or improve current resource conditions on remaining 69 allotments.
4. Maintain a livestock production goal of approximately 155,000 AUMs over the long term (20 years).
5. Control noxious weeds and pests to protect range sites.

## Proposed Actions

Livestock grazing would remain as an allowable use on approximately 2,197,937 acres or 98 percent of the total Federal range within the resource area. Federal ranges would be closed to grazing only under the authority of emergency conditions or land withdrawals.

### IMPLEMENTATION SCHEDULE

Within 5 months of publication of the Final RMP/EIS, the Richfield District Manager and House Range Resource Area Manager will issue the Record of Decision/Rangeland Program Summary. This document will summarize, by allotment, management decisions and planned actions. The proposed planned action will be implemented through the development of AMPs (activity plans). The priority for implementation of the grazing management program will follow the guidelines stated in the BLM Grazing Management Policy.

### LONG-TERM MANAGEMENT STRATEGY:

Implement intensive management on 32 priority grazing allotments and continue operation of existing AMPs as funding and manpower become available over the long term (20 years) (see Figure 2-6 and Table 2-16).

TABLE 2-16

Thirty-Two Priority Allotments
Designated for Intensive Management (AMPs)

| Topaz Unit | Management Category | Priority |
|---|---|---|
| 1. Callao Bench | I | 16 |
| 2. Cherry Creek[a] | M | 22 |
| 3. Cowboy Pass[a] | M | 29 |
| 4. East Topaz[a] | M | 28 |
| 5. Gandy[a] | I | 11 |
| 6. Mountain | I | 14 |
| 7. Partoun | M | 13 |
| 8. Sand Pass[a] | M | 25 |
| 9. Sheep | I | 23 |
| 10. Smelter Mountain | I | 21 |
| 11. Sugarville | M | 19 |
| 12. Tatow | I | 8 |
| 13. Thousand Peaks | I | 7 |
| Tintic Unit | | |
| 14. Beryllium | I | 27 |
| 15. Boulter | I | 2 |
| 16. Dust Bowl[a], Juab, Levan, and Mills | I | 17 |
| 17. Ferner Dog Valley[a] | I | 4 |
| 18. Kimball Creek[a] | I | 6 |
| 19. Maple Peak | I | 1 |
| 20. McIntyre | I | 3 |
| 21. Middle Fork[a] | I | 30 |
| 22. North Scipio[a] | I | 31 |
| 23. Okelberry[a] | I | 5 |
| 24. Rocky Ford[a] | I | 32 |
| 25. Sage Valley 16[a] | I | 9 |
| 26. Sage Valley 17[a] | I | 10 |
| 27. Sevier River [a] | I | 15 |
| 28. Shearing | I | 12 |
| 29. Sheeprock[a] | I | 20 |
| 30. Washboard | I | 18 |
| 31. West Mona | I | 26 |
| 32. Yuba | I | 24 |

[a] Allotments with existing Allotment Management Plans scheduled for update/revision.

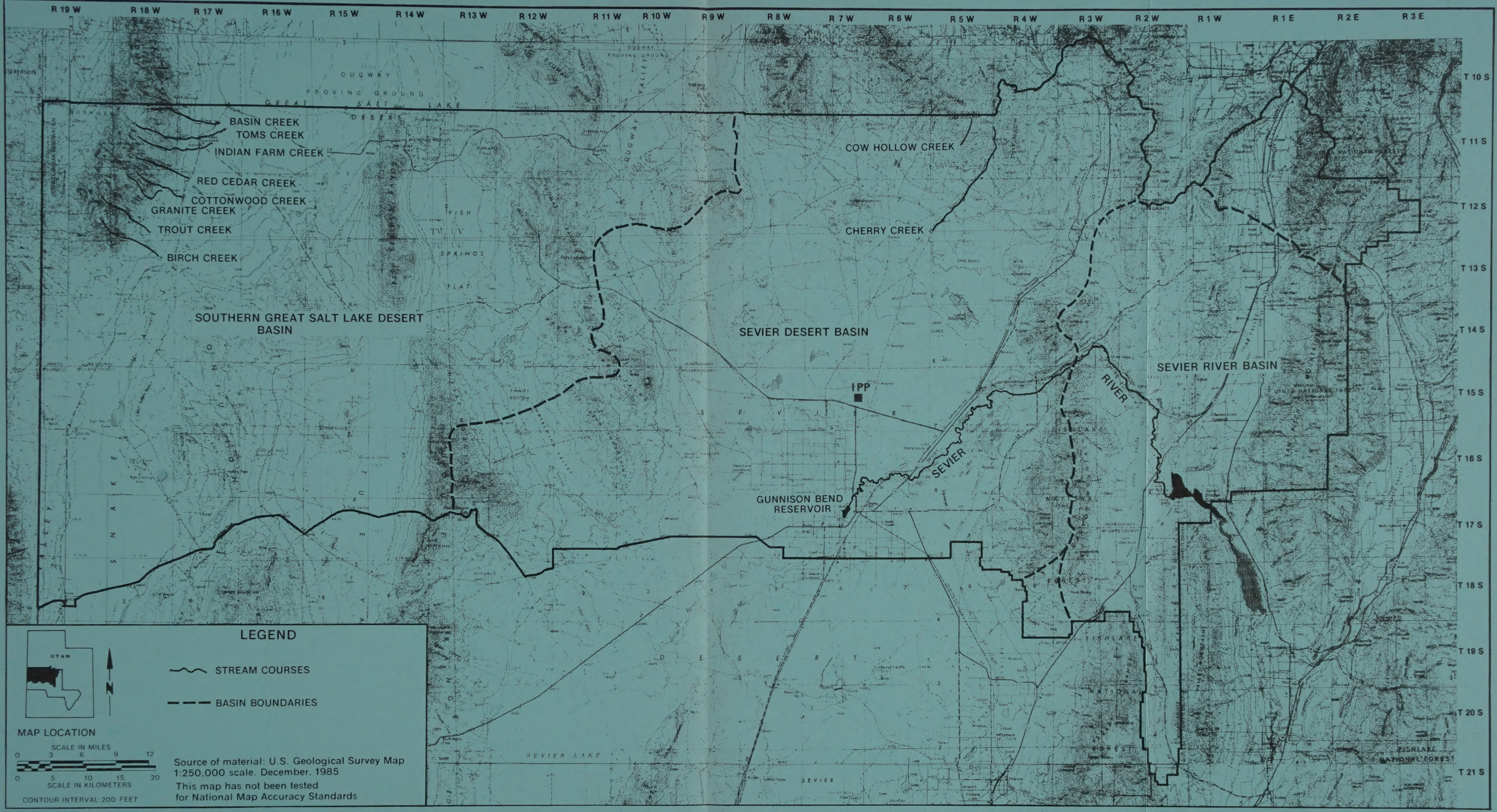


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FIGURE 2- 8

PERENNIAL STREAMS AND GROUND WATER BASINS

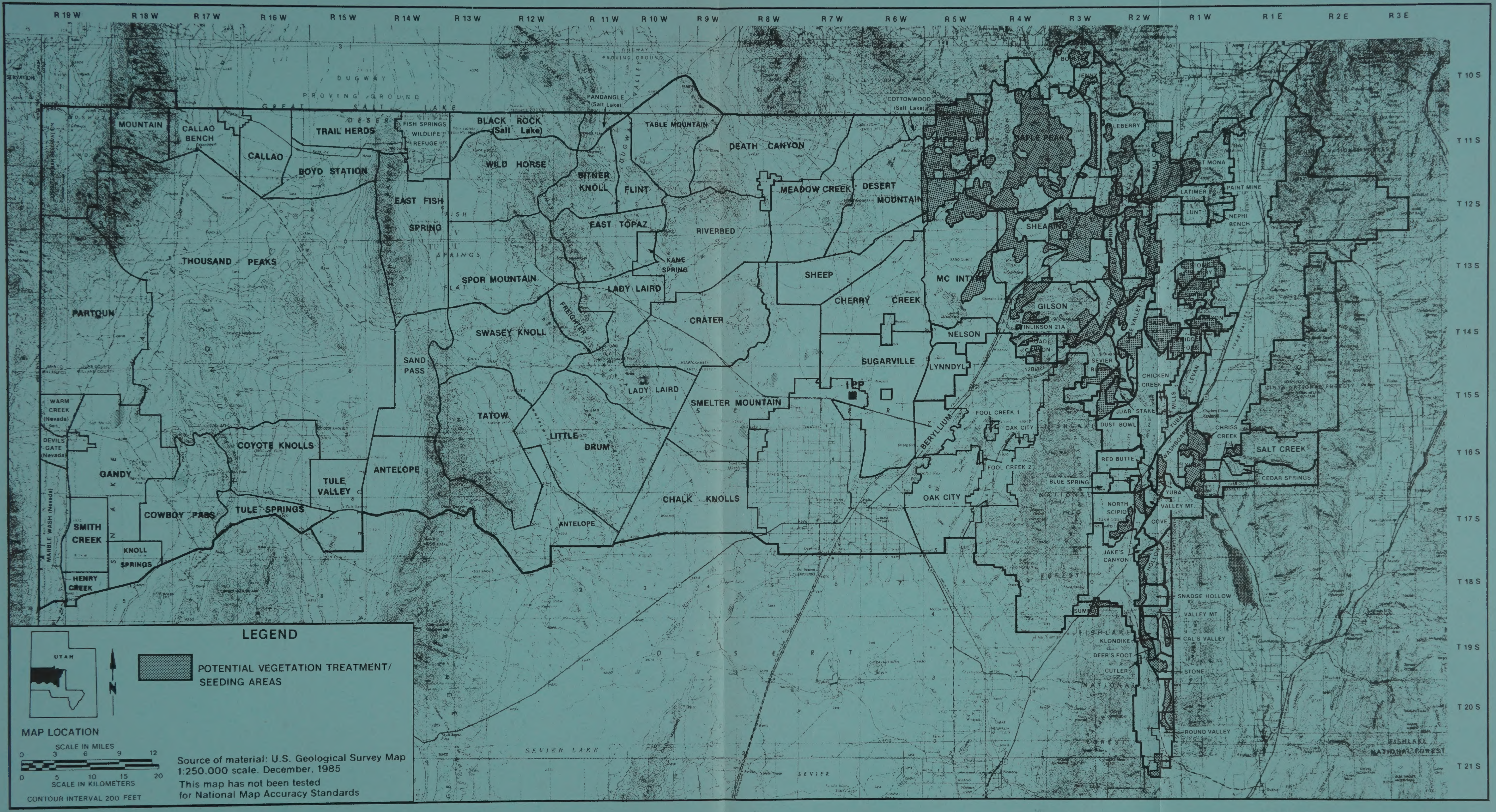

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FIGURE 2- 9
POTENTIAL VEGETATION TREATMENT/ SEEDING AREAS

### Implement Intensive Management Goals

*Tintic Unit (Eastern Foothills*

Complete AMP development and implementation on 19 priority "I" allotments to meet the following goals:

1. Satisfy or exceed the existing active grazing preference (demand) for livestock AUMs on those allotments that are presently not meeting that forage demand. This demand would be primarily satisfied by the application of grazing management systems in concert with vegetation treatment and seeding on over 65,000 acres of pinyon/juniper and sagebrush communities.

2. Improve range condition from poor and fair to good on the 19 priority allotments.

*Topaz Unit (West Desert)*

Complete AMP development and implementation on seven "I" category allotments and six "M" category allotments to meet the following goals (see Figure 2-5).

1. Improve livestock distribution and overall utilization in key forage communities (vegetation associations) and improve range condition from poor and fair to good on these 13 allotments where indicated. This would primarily be accomplished through grazing system implementation and the maximum development of dependable water facilities.

### Continue Operation of AMPs

Existing AMPs that have been developed for 16 allotments would continue to be implemented, updated, and revised, as necessary (see Figure 2-6).

Approximately 26 priority "I" category allotments and six "M" category allotments would be scheduled to have AMPs completed over a 10-year period (approximately three plans completed each year). These "M" allotments need developed plans primarily to improve grazing distribution through water developments. As funding and manpower become available, these 32 priority allotments would be targeted to meet the long-term management objectives (see Figure 2-6).

## MONITORING PROGRAM

The priority allotments outlined in the proposed action will be monitored to determine if management objectives are being met. Four primary studies basic to rangeland evaluation will be used: (1) actual grazing use; (2) vegetation utilization; (3) trend; and (4) climate analyses. These studies will be conducted according to BLM procedures (outlined in Rangeland Monitoring Technical References 4400-1, page 206, 4400-4). In addition, studies will be established to monitor priority riparian and aquatic habitat and key watershed areas.

Data from these studies will be evaluated to determine management effectiveness and to assist in making necessary adjustments. Evaluations will be made prior to implementation of each step of a phased adjustment to determine whether the total amount of adjustment should be modified (either increased or decreased) (43 CFR 4110.3-2(e)). Management will be modified if evaluations determine that specific allotment objectives are not being achieved. Administrative modifications could include changes in livestock patterns of use, livestock numbers, periods of use, rangeland improvements, or a combination of these.

## STOCKING LEVELS (ISSUE NO. 1)

### Initial Allocation

Livestock forage would be initially allocated at the existing active preference of 147,390 AUMs (same as Existing Management). However, 38 allotments have an estimated capacity 10 percent or more below active preference, existing wild horse and existing big game use (AUMs). Under this level, all 38 allotments would receive livestock reductions as shown in Table 2-17 should monitoring studies indicate these adjustments within 5 years of plan completion.

### Long-Term Allocation

Long-term grazing allocation (at the end of 20 years) would be expected to reach approximately 155,131 AUMs following the application of management on 32 priority allotments (Table 2-16). This would be the minimum expected increase, primarily resulting from the manipulation of 65,000 acres of brush/trees.

## USE ADJUSTMENT CRITERIA

### Initial Adjustment

Any reductions in livestock grazing preference indicated from inventory and at least a 5-year monitoring period will be initiated by agreements or decisions on a case-by-case basis. Potential forage increases revealed by inventory and monitoring data and allocated to livestock may be authorized first to restore any suspended non-use on a permit and then increase preference as determined by the Area Manager.

The 38 allotments to be initially monitored for verification of estimated capacity (see Table 2-17)

### TABLE 2-17

### Allotments Indicated for Monitoring and Potential Reductions in the Proposed Plan

| Allotments | Federal Range (Acres) | Active Preference (AUMs) | Estimated Capacity[a] (AUMs) | Initial Indicated Reduction (AUMs) |
|---|---|---|---|---|
| Antelope | 72,102 | 4,055 | 2,961 | 1,094 |
| Bitner Knoll | 21,170 | 1,995 | 1,706 | 289 |
| Death Canyon | 50,366 | 6,138 | 5,453 | 685 |
| Lady Laird | 53,797 | 4,830 | 4,064 | 766 |
| Little Drum | 66,914 | 4,929 | 4,336 | 593 |
| Riverbed | 52,175 | 4,906 | 4,239 | 667 |
| Sand Pass | 32,222 | 2,000 | 1,481 | 519 |
| Swasey Knoll | 47,282 | 4,350 | 3,333 | 1,017 |
| Table Mountain | 36,459 | 4,048 | 3,230 | 818 |
| Wild Horse | 44,383 | 3,577 | 2,880 | 697 |
| Beryllium | 8,367 | 666 | 533 | 133 |
| Big Hollow[b] | 3,978 | 216 | 35 | 181 |
| Ferner Dog Valley | 16,597 | 1,218 | 970 | 248 |
| Fool Creek 1 | 959 | 72 | 39 | 33 |
| Gilson | 20,582 | 1,287 | 986 | 301 |
| Jakes Canyon | 2,069 | 113 | 38 | 75 |
| Juab | 1,253 | 112 | 82 | 30 |
| Kimball Creek[b] | 20,600 | 3,081 | 1,727 | 1,354 |
| Klondike[b] | 2,072 | 60 | 14 | 46 |
| Lynndyl | 11,154 | 1,676 | 575 | 1,101 |
| Maple Peak[b] | 59,520 | 5,137 | 4,091 | 1,046 |
| Middle Fork | 3,178 | 546 | 251 | 295 |
| Nelson | 8,288 | 521 | 309 | 212 |
| North Scipio[b] | 4,525 | 762 | 539 | 223 |
| Oak City | 19,281 | 2,205 | 1,149 | 1,056 |
| Okelberry[b] | 5,633 | 861 | 619 | 242 |
| Paint Mine | 2,674 | 545 | 216 | 329 |
| Sage Valley 16[b] | 4,916 | 948 | 525 | 423 |
| Sage Valley 17[b] | 11,044 | 2,376 | 1,376 | 1,000 |
| Salt Creek | 3,323 | 225 | 164 | 61 |
| Sevier River[b] | 5,331 | 1,066 | 601 | 465 |
| Snadge Hollow[b] | 3,399 | 77 | 34 | 43 |
| Spring Canyon | 4,562 | 638 | 277 | 361 |
| Stone | 2,303 | 120 | 61 | 59 |
| Summit | 3,752 | 238 | 138 | 100 |
| Valley Mountain[b] | 1,818 | 100 | 52 | 48 |
| Washboard | 4,477 | 860 | 411 | 449 |
| Yuba | 3,850 | 773 | 542 | 231 |
| Total |  | 67,327 | 50,037 | 17,290 |

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[a] These adjustments would only be implemented when verified by monitoring data within 5 years of plan completion.

[b] Allotments also scheduled for vegetation treatment (seedings).

would be done so within 5 years. Where reductions in active grazing preference are warranted, agreements and/or decisions will be issued as necessary.

### Long-Term Adjustments

All additional AUMs of forage resulting from successful management practices would be proportionately distributed between livestock and big game species. (The distribution of these additional AUMs would be evaluated on the suitability of the habitat for wildlife use in concert with demand.) Any increase in livestock allocation would go first to restore suspended non-use in an allotment and then be considered on a case-by-case basis.

## GRAZING ADMINISTRATION

The proposed action will be administered and managed using standard BLM operating procedures. Each livestock permittee will be issued temporary grazing authorizations or term permits through the BLM HRRA Office. These will specify the allotment, proposed forage use, period and/or pattern of use, numbers, and kinds of livestock.

Livestock grazing will be monitored and supervised by permittees and BLM throughout the year. Marking of livestock (preferred methods are ear tagging or dye marking) may be required to monitor livestock movement and proper stocking levels. Permittees will be required to request, in writing, any desired changes in use prior to the grazing period, since such changes could be inconsistent with management objectives. Grazing use outside the limits of the selected alternative(s) and without prior authorization will be considered trespass. Should trespass occur, BLM will take action to ensure it is eliminated and that payment is made for vegetation consumed and/or damage done. BLM will also make adjustments in the grazing management program during drought or other emergencies.

The action described in the Monitoring section will be used to adjust grazing use.

Administrative adjustments could be made to:

1. Authorize the movement of livestock from one pasture to another ahead of schedule if forage were lacking in the first pasture and available in the second.
2. Reduce livestock numbers temporarily if forage production were less than normal.
3. Increase livestock numbers if there is an abundance of available forage.
4. Adjust livestock use to limit utilization of key plant species to a predetermined level (e.g., 50 percent). Livestock use could be increased, decreased, or eliminated from an allotment to control utilization of key plant species. Rangeland condition, competition between big game and livestock, amount of available forage and water, and time of year will be considered in any decision to move livestock. Such adjustments will be designed to accomplish grazing management objectives.

### Conversion in Kind/Class Livestock

Conversions in both kind and class of livestock are authorized on a case-by-case basis, providing a suitability study and accompanying EA indicate such conversions are justified.

Priority for consideration is given to: (1) those operators who are considering dual use (sheep and cattle) as a management tool; and (2) those operators that would have the flexibility to change from sheep to cattle on West Desert allotments suitable for that conversion.

### Allotment Categorization

All allotments in the HRRA have been categorized to set management priorities, as outlined in BLM's M I C Selective Management Policy. Appendix 9 shows which allotments have been placed under each category and the criteria used in the analysis (see also Figure 2-5).

The categorization process provides a framework only, under which BLM may establish management priorities and track accomplishment. As situations, events, or conditions change, allotments may be placed in a different category to better correspond to their needs.

### Negotiate Grazing Agreements

Negotiate agreements on all allotments where no change in management is needed or when permittees agree to adjustments in stocking levels prior to the completion of monitoring period.

BLM personnel, in cooperation with affected permittees, will develop or update Allotment Management Plans (AMPs) to implement the grazing management program. If BLM personnel and permittees fail to reach an agreement, an AMP that protects resources will be implemented by decision of the area manager. The permittee will, however, have the right to appeal any such decisions.

Livestock grazing levels and recommended patterns of use will be specified in the individual AMPs, as will BLM's and range users' responsibilities for developing and maintaining rangeland improvements and monitoring programs. Each AMP will be implemented by the area manager and livestock permittees as it is completed.

Details of the proposed action will be further refined and specifically matched to resource conditions during preparation of AMPs. Site-specific rangeland improvements would be evaluated and proposed.

### Livestock Season of Use Adjustments

The existing seasons of use by livestock were primarily established to accommodate the needs of ranching operations.

Presently, major adjustments to season of use are evaluated upon request or when resource conditions indicate a change is needed from monitoring data. A suitability analysis and EA are completed prior to any authorized change.

Smaller seasonal adjustments of generally less than 15 days on either side of a turnout/turnoff date may be authorized, providing suitable annual resource authorization is within active preference. However, the 14 grazing allotments listed in Table 2-18 would receive priority for monitoring of spring grazing conditions. Other allotments may be included for monitoring as operators or conditions change in other grazing areas.

**TABLE 2-18**
**Allotments with Continuous Spring Use by Cattle**

| Topaz Unit | | Tintic Unit | |
|---|---|---|---|
| Allotment | Federal Acres | Allotment | Federal Acres |
| Boyd Station | 21,173 | Paint Mine | 2,674 |
| Callao | 20,794 | Sage Valley 16 | 4,916 |
| Cherry Creek | 36,562 | Shearing | 32,629 |
| East Fish Springs | 50,930 | West Mona | 17,316 |
| Gandy | 52,515 | | |
| Partoun | 71,983 | Subtotal | 57,535 |
| Sheep | 25,114 | | |
| Smelter Mountain | 60,057 | | |
| Sugarville | 51,391 | | |
| Thousand Peaks | 332,022 | | |
| Subtotal | 722,541 | | |
| Total Acres | 780,076 | | |

Should evaluations show that early spring grazing by cattle is contributing to poor range conditions, one of the following operations would be employed:

1. The spring period would be shortened where applicable.
2. Alternate year spring rest would be required through a grazing system.
3. Spring grazing would be eliminated.

### Range Improvements

*Structural*

Structural improvements would continue to be planned and installed to improve or facilitate management (e.g., livestock distribution, trespass, control, etc.). Maintenance of all structural-type facilities (fences, cattleguards, etc.) have been assigned to the operators. However, water facilities, covered under cooperative agreements, would require the operators to contribute specific fees/AUMs to cover maintenance costs incurred by BLM.

New structural improvements would be authorized on the 26 "I" and 6 "M" category allotments to meet the specific management objectives (Table 2-16). Project scheduling, design, and implementation would be prioritized to implement AMP objectives, contingent upon available funding. Range improvements and facility maintenance would be as described. In the Administrative Features section, maintenance of all structural type-facilities would be assigned to operators. However, new water facilities covered under agreement would continue to require the operators to contribute specific fees/AUMs to cover maintenance costs incurred by BLM.

*Non-structural (Vegetation Manipulation)*

Vegetation treatment projects, primarily chaining and roller chopping or prescribed burning followed by seedings, would continue on a priority basis where favorable benefit/costs are indicated considering all resource use. Vegetation treatment would be planned for approximately 65,000 acres (increase of nearly 19,000 AUMs) over an implementation period of 20 years. This would equate to 3,250 acres of treatment per year, which approximates current levels.

Minimum rest requirements from grazing, as well as other mitigating measures, are outlined in the standard operating procedures. Non-structural improvements (seedings) would be the maintenance responsibility of the BLM.

All manipulations would occur on "I" category allotments in the Tintic region on suitable ranges evaluated through the standard operating procedures. The following criteria would be adhered to: chaining and/or burning would be designed in areas to enhance wildlife browse productivity, while maximizing edge effect and other escape cover and shelter needs for big game. Manipulation activities would be restricted to 15-percent slope or less and be excluded from riparian vegetation communities unless treatment could improve resource conditions within these communities. Seeding activities would emphasize establishment of wildlife browse species and watershed stabilizing herbaceous cover.

Seeding mixtures would include grass species suitable to improve spring livestock grazing use (i.e., improved species of introduced and native early spring perennial grasses).

Cost/share opportunities would be fully explored with all operators and benefitting groups/associations and cooperator agencies.

Allotments proposed to receive priority for treatment projects are listed in Table 2-19.

### Livestock Grazing in Riparian Areas

Under this alternative, the estimated 2,500 acres of riparian habitat in the resource area would be evaluated and monitored for resource condition within 3 years. Where resource conditions show a need for protection from livestock grazing, management options of seasonal deferment, off-site water development, and/or exclosure fencing with water gaps would be applied as necessary. The perennial streams of the Deep Creek Mountains would receive first priority for monitoring, evaluation, and management. See Tables 2-20 and 2-21 for stream and spring/wetland habitat locations and conditions.

### Predator Control

Predator control will continue in accordance with the Richfield District Animal Damage Control Plan, which is reviewed annually.

### Noxious Weed and Pest Control

Inventory and develop a cooperative plan for control of knapweed and other noxious weeds.

Cooperate with APHIS for control of grasshoppers.

## SUPPORT REQUIREMENTS

### Support Needs

Clerical support would be needed during the development phase of AMPs and grazing agreements prior to implementation. Support will be needed from the soil, water, and air program for conducting ground water and well site investigations on proposed well sites and spring developments. Support will also be needed for clearances for T&E species, archaeological values, mineral resources, and soil evaluations for areas proposed for treatments or facilities. Division of Operations support will be needed for designing projects, for construction and/or installation, and for some contracting and maintenance purposes.

### Program Coordination

Coordination with the wildlife, watershed, weed control, and recreation programs concerning placement and design of vegetation treatments, management facilities, and management practices will be needed during the development phase.

TABLE 2-19

Allotments With Priority for Treatment Projects

| Allotments | Acres Suitable for Treatment | Alltoments | Acres Suitable for Treatment |
|---|---|---|---|
| Maple Peak[a] | 16,000 | Summit | 300 |
| Kimball Creek[a] | 5,500 | Washboard | 2,500 |
| Shearing[a] | 12,000 | Yuba | 1,850 |
| Okelberry | 1,000 | Middle Fork | 2,400 |
| Sevier River | 1,500 | Dust Bowl[a] | 3,200 |
| Big Hollow | 400 | McIntyre[a] | 8,000 |
| Snadge Hollow | 400 | Ferner Dog Valley[a] | 4,500 |
| Stone | 700 | | |
| Riley Spring | 1,000 | Sage Valley 16[a] | 2,500 |
| Stone Quarry | 1,500 | Sage Valley 17[a] | 2,000 |
| Jenny Lind | 685 | North Scipio | 1,500 |
| Sheep Rock[a] | 5,000 | Klondike | 243 |
| Rocky Ford | 800 | Deerfoot | 500 |
| Chriss Creek | 550 | West Mona | 400 |
| Juab | 500 | Boulter | 1,200 |
| Gilson | 1,600 | Spring Canyon | 1,500 |
| | | Total | 81,728[b] |

[a] Approximately 70 percent of all acres treated would occur in these nine allotments.

[b] Includes total acres suitable in these allotments. However, not all of these acres would be treated (approximately 65,000 acres over 20 years.).

## TABLE 2-20

### Streams Habitat Location and Condition

| Name | Location (on BLM-Administered Lands) | Allotment | Stream Condition | Riparian Condition | Perennial Miles on BLM |
|---|---|---|---|---|---|
| Basin Creek | T11S R18W Sec 4 to T11S R17W Sec 6 | Callao Bench | No Data | No Data | 2.5 |
| Birch Creek | T12S R19W Sec 25 to T13S R18W Sec 10 | Thousand Peaks | Most pools are intermediate, pools to riffle ratio is 34 percent of optimum, pool quality is 19 percent of optimum. | Fair to poor condition. Trend static. | 7.1 |
| Cherry Creek | T12S R5W Sec 3 | McIntyre | Pools are shallow and exposed; moderate to excessive bank damage due to livestock grazing. | Fair condition, trend static. | 0.1 |
| Cottonwood Canyon Creek | T12S R18W Sec 4 to T12S R18W Sec 11 | Thousand Peaks | No data. | No data. | 3.1 |
| Cow Hollow Creek | T11S R5W Sec 5 to T11S R5W Sec 8 | Sheeprock | Fair | Fair condition, Trend down due to severe overgrazing. | 1.0 |
| DMAD Reservoir | T17S R6W | Oak City | No data. | No Data. | 4.5 |
| Granite Creek | T12S R18W Sec 6 to T12S R17W Sec 18 | Thousand Peaks | Most pools are intermediate; banks subject moderate or heavy erosion. | Good condition, trend static. | 5.1 |
| Indian Farm Creek | T12S R18W Sec 4 to T12S R18W Sec 12 | Thousand Peaks | Most pools are good to intermediate with good features; banks stable; optimum habitat for fish in places. | Good condition, trend static. | 5.1 |
| Red Cedar Creek | T11S R18W Sec 31 to T12S R17W Sec 6 | Thousand Peaks | Most pools are intermediate; little evidence of bank erosion; optimum habitat for fish in places. | Fair condition, trend static. | 4.9 |
| Sevier River | T15S R2W Sec 8 to T14S R2W Sec 31 | Dust Bowl<br>Sevier River | No data. | No data. | 8.9 |
| Sevier Bridge Reservoir (Yuba) | T17S R2W 1W | Washboard/Yuba | No data. | No data. | 3.3 |
| Tom's Creek | T11S R19W Sec 16 to T11S R17W Sec 20 | Mountain | Poor quality varies from poor to excellent, banks show little evidence of erosion. Recent livestock use is heavy. | Upper portion good condition with static trend. Lower portion poor condition with static trend. | 6.6 |
| Trout Creek | T12S R19W Sec 12 to T13S R18W Sec 10 | Thousand Peaks | Most pools are intermediate to poor with limiting factor being pool to riffle ratio and poor quality. | Upper portion good condition with static trend. Lower portion poor condition with static trend. | 6.1 |

TABLE 2-21

Spring/Wetland Habitat Location and Condition

| Name | Location | Allotment | Condition | Acres |
|---|---|---|---|---|
| Antelope Springs | T17S R13W Sec 11 | Antelope | Not known. | 1 |
| Baker Hot Springs | T14S R8W Sec. 10 | Crater | Not known. | 100 |
| Cane Springs | T16S R15W Sec 12 | East Fish Spring | Not known. | 2 |
| Cold Spring | T11S R14W Sec 4 | East Fish Spring | Not Known | Less Than 1 |
| Coyote Springs Complex | T16S R15W Sec 12 | Tule Valley | Poor condition; downward trend. | 20 |
| Salt Marsh Lake Complex | T15S R18W Sec 20, 30, 31. | Gandy | Fair condition; trend down. | 809 |
| Swasey Springs | T16S R13W Sec 24 | Tatow | Not known. | 1 |
| Topaz Slough | T16S R8W Sec 6 | Smelter Mountain | No known. | 40 |
| Tule Spring | T17S R15W Sec 3 | Tule Valley | Fair condition; static trend. | 23 |
| Twin Springs | T16S R18W Sec 22 | Gandy | Fair, static. | 30 |
| Willow Spring | T17S R15W Sec 3 | Tule Valley | Not Known | Less than 1 |

# WILDLIFE

## Introduction

### MULE DEER

Deer herd units 13 (Vernon), 14 (Tintic), 42 (South Nebo), 53 (Oak Creek), 54 (Fillmore), 62A (West Desert North), and 62B (West Desert Central) are partially located inside the planning area (Figure 2-10). Critical deer summer, fawning, and winter habitat types are located within the boundaries of herd units 13, 14, 42, 54, and 62A and are shown in Figure 2-10.

According to Utah Division of Wildlife Resources (UDWR) data, there are approximately 37,512 acres of critical deer summer and fawning habitat. Distribution of these acres is shown by allotment in Table 2-22 along with other wildlife data. Based on inventory data, 22 allotments or approximately 25,000 acres (65 percent) of this habitat are in poor habitat condition, while six allotments or 13,300 acres (35 percent) are in fair condition. About 14,000 acres or 36 percent of critical deer summer range is considered critical due to fawning. The UDWR reports that 390 acres (3 percent) are in poor condition and 13,610 acres (97 percent) to be in fair condition (UDWR, 1985b).

There are approximately 10,000 acres of critical deer winter habitat. Based on inventory data and consultation with UDWR, approximately 1,500 acres (14 percent) are in fair habitat condition, while 8,200 (86 percent) are in poor condition.

Estimates of deer numbers and required AUMs on critical summer and winter habitat are shown by allotment in Table 2-22. These estimates are based on actual inventory data, as well as long-term population numbers determined from pellet group transects, browse utilization, trend studies, and hunter harvest information provided by UDWR.

### ELK

A portion of elk herd unit 11 (Nebo) is located in the planning area. Critical elk summer and winter habitat shown in Figure 2-11.

There are approximately 1,440 acres of critical elk summer habitat and 10,200 acres of critical elk winter habitat.

Based on inventory data and consultation with UDWR. approximately 1,440 acres (100 percent) of critical summer habitat are in poor condition; 2,000 acres (20 percent) of critical winter habitat are in fair condition. and 8,200 acres (80 percent) in poor condition. Estimates of elk numbers and required AUMs on critical summer and winter habitats are shown on Table 2-22.

### ANTELOPE

Portions of two subunits of antelope herd unit 2 are located in the planning area (Figure 2-12). There are approximately 1,500,000 acres of yearlong antelope habitat (Table 2-22). The quantity and quality of spring forage are factors that limit antelope abundance. Note that Figure 2-1 shows very little composition of key antelope spring forage. The only critical habitat areas are around the limited water sources. According to UDWR, this habitat is in generally fair condition. Estimates of antelope numbers and required AUMs are shown on Table 2-22.

### BIGHORN SHEEP

There are approximately 36,100 acres of substantial value winter and 12,100 acres of substantial summer habitat (Figure 2-11) in the planning area. In 1984, UDWR released 15 ewes and 2 rams in the Deep Creek Mountains. Future plans call for releasing more Rocky Mountain bighorn sheep in the Deep Creek and desert bighorn sheep in the Fish Springs Mountains. Distribution of mountain bighorn sheep by allotment is shown in Table 2-22. The condition of summer and winter habitat is not known.

### UPLAND GAME

Five species of upland game are found in the planning area. These species are California quail, Hungarian partridge, sage grouse, chukar partridge, and blue grouse. There are approximately 393,000 acres of upland game habitat in the planning area.

Actual census data are not available; distribution is limited to the availability of water and suitable forage in preferred plant associations.

### ENDANGERED ANIMAL SPECIES

There are two Federally-listed endangered species in the resource area, the northern bald eagle and peregrine falcon. The eagle species is classified as a winter resident (Hayward et al., 1973). The number of wintering eagles is unknown; however, population size and trend are thought to be low and static. This species prefers habitat near lakes, reservoirs, and marshes adjacent to open country including sagebrush areas with perching and roosting sites located nearby. An important prey for bald eagles is blacktailed jackrabbits.

Recorded sites of the peregrine falcon include Fish Springs Waterfowl Management Area and

TABLE 2-22

Big Game Summary for House Range Resource Area

| Allotment | Big Game Species | Herd Unit | Prior Stable Number | Prior Stable AUMs of Forage | Current Population Size | Current AUMs of Forage | Acres of habitat | Possible[a] Limiting Factors | Critical Big Game Habitat Condition |
|---|---|---|---|---|---|---|---|---|---|
| Antelope | Deer | 62B | 311 W | 175 | 250 W | 140 | 30,976 High Priority Winter | Competition with winter sheep for browse. | |
| | Antelope | 2 | 356 YL | 454 | 30 YL | 38 | 61,644 Limited Value | Same; lack of adequate water distribution. | |
| Beryllium | Antelope | 2 | 17 YL | 22 | 5 YL | 6 | 8,367 Limited Value | | |
| Big Hollow | Deer | 54 | 214 W | 120 | 20 YL | 35 | | | |
| Bitner Knoll | Deer | 62 A | 41 YL | 72 | 20 YL | 35 | 78 Critical Summer[b]<br>8,768 Substantial Value YL | Competition with winter sheep for browse. | Poor[c] |
| | Antelope | 2 | 67 YL | 86 | 10 YL | 13 | 17,664 Substantial Value YL | Same; lack of adequate water distribution. | |
| | | | | | | | 2,304 Limited Value YL | Same; lack of adequate water distribution. | |
| Blue Spring | Deer | 53 | 70 YL | 99 | 20 YL | 35 | | | |
| | Elk | 11 | 0 | 0 | 6 YL | 41 | | | |
| Boulter | Deer | 14 | 101 W | 57 | 100 YL | 176 | 9,126 High Priority Winter | Competition with winter sheep for browse; | |
| | | | 306 S | 369 | 0 | 0 | | Competition with spring sheep for browse. | |
| Boyd Station | Deer | 62A | 10 YL | 18 | 5 YL | 9 | 856 Yearlong | | |
| | Antelope | 2 | 10 YL | 13 | 20 YL | 26 | | | |
| Broad Canyon | Deer | 14 | 58 W | 33 | 20 YL | 35 | 6,873 High Priority Winter | | |
| | Elk | 11 | 6 YL | 34 | 0 | 0 | 7,270 Yearlong | | |
| Callao | Antelope | 2 | 218 YL | 278 | 15 YL | 19 | | | |
| Callao Bench | Deer | 62A | 206 W | 116 | 206 W | 116 | 272 Critical Summer[b] | | Poor[c] |
| | | | | | | | 3,270 Critical Winter | | |
| | | | | | | | 1,750 Critical Fawning Area | | Fair |
| | Antelope | 2 | 218 YL | 278 | 15 YL | 19 | 18,918 Limited Value YL | | Fair |
| | Bighorn Sheep | | 15 YL | 33 | 0 | 0 | 1,800 Substantial Value Winter | | |
| Cals Valley | Deer | 54 | 97 W | 54 | 10 YL | 21 | | | |
| Cedar Spring | Deer | 42 | 100 W | 56 | 25 YL | 44 | 895 Critical Winter | Lack of key win. forage | Poor |
| | Elk | 11 | 1 W | 2 | 0 | 0 | 851 High Priority Winter<br>300 High Priority Winter | Competition with winter cattle for browse. | |
| Chalk Knolls | Antelope | 2 | 159 YL | 203 | 30 YL | 38 | | Lack of water. | |
| Cherry Creek | Antelope | 2 | 121 YL | 154 | 30 YL | 38 | 17,664 Substantial Value YL<br>23,168 Limited Value YL | | |
| Chicken Creek | Deer | 14 | 25 W | 14 | 0 | 0 | 960 High Priority Winter | Competition with winter cattle for browse. | |
| | Elk | 11 | 3 YL | 18 | 3 YL | 18 | | | |
| Chriss Creek | Deer | 42 | 40 W | 22 | 10 YL | 18 | 739 Critical Winter<br>224 High Priority Winter | Lack of key winter forage | Poor |
| Cove | Deer | 54 | 175 W | 98 | 25 YL | 44 | | | |
| Cowboy Pass | Antelope | 2 | 136 YL | 174 | 30 YL | 38 | 30,400 Substantial Value YL | Competition with winter sheep for browse; lack of adequate water distribution. | |
| | | | | | | | 30,720 Limited Value YL | Same. | |
| Coyote Knolls | Antelope | 2 | 226 YL | 289 | 30 YL | 38 | 25,152 Substantial Value YL | Competition with winter sheep for browse; limited water distribution. | |
| | | | | | | | 5,056 Limited Value YL | Same. | |
| Crater | Deer | 14 | 0 | 0 | 0 | 0 | 3,392 High Priority Winter | Competition with winter sheep for browse; limited water distribution. | |
| | Antelope | 2 | 204 YL | 260 | 30 YL | 38 | 11,404 Substantial Value YL | Same as above. | |
| | | | | | | | 51,520 Limited Value YL | Same as above. | |
| Cutler | Deer | 54 | 10 W | 6 | 5 YL | 10 | | | |
| Death Canyon | Deer | 13 | 564 W | 317 | 100 W | 56 | 1,664 High Priority Winter | Competition with winter sheep and cattle for browse. | |
| | | | 88 YL | 154 | 25 YL | 44 | 6,272 Yearlong | Same as above. | |
| | | | | | | | 198 Critical Summer | Limited water distribution. | Poor[c] |
| | Antelope | 2 | 163 YL | 208 | 40 YL | 52 | 39,744 Substantial Value YL | Competition with winter sheep and cattle. | |
| Deer Foot | Deer | 54 | 97 W | 55 | 25 YL | 44 | | | |
| Desert Mountain | Deer | 13 | 165 W | 93 | 200 W | 112 | 307 High Priority Winter | Competition with winter sheep for browse. | |
| | | | | | 20 YL | 35 | 8,567 Yearlong | | |
| | Antelope | 2 | 139 YL | 177 | 40 YL | 52 | 30,912 Substantial Value YL | Competition with winter sheep for browse. Lack of adequate water distribution. | |
| | | | | | | | 10,752 Limited Value YL | Same as above. | |

TABLE 2-22 (continued)

| Allotment | Big Game Species | Herd Unit | Prior Stable Number | Prior Stable AUMs of Forage | Current Population Size | Current AUMs of Forage | Acres of habitat | Possible[a] Limiting Factors | Critical Big Game Habitat Condition |
|---|---|---|---|---|---|---|---|---|---|
| Devils Gate | Antelope | 2 | 0 | 0 | 10 YL | 13 | | | |
| Dust Bowl | Deer | 53 | 297 W | 167 | 150 W<br>40 YL | 97<br>70 | 2,176 High Priority Winter | Competition with winter cattle. | |
| | Elk | 11 | 2 YL | 11 | 10 YL | 58 | | | |
| East Fish Spring | Deer | 62A | 54 YL | 85 | 20 YL | 35 | 195 Critical Summer[b]<br>15,448 Yearlong | | Poor[c] |
| | Antelope | | 127 YL | 162 | 20 YL | 26 | 29,376 Substantial Value YL | Competition with early winter cattle for browse. | |
| | | | | | | | 8,960 Limited Value YL | Same; limited water distribution. | |
| | Bighorn Sheep | | 52 YL | 113 | 0 | 0 | 16,800 Yearlong | | |
| East Topaz | Deer | 62A | 24 YL | 42 | 24 YL | 42 | 740 Critical Summer[b]<br>5,312 Yearlong | Competition with winter sheep for browse. | Fair[c]<br>Poor[c] |
| | Antelope | 2 | 93 YL | 119 | 15 YL | 19 | 29,376 High Priority YL | Same as above. | |
| Ferner Dog Valley | Deer | 14 | 180 W<br>130 S | 101<br>157 | 180 W<br>130 S | 101<br>157 | 15,040 High Priority Winter<br>1,440 Critical Summer<br>474 High Priority Summer | Decadent plants out number young plants.<br>Competition with summer cattle. | Poor[c] |
| | Elk | 11 | 20 YL | 114 | 20 YL | 100 | 1,400 Critical Summer<br>19,213 Yearlong | Same as above.<br>Same as above. | Poor[c] |
| Finlinson 21A | Deer | 14 | 50 W<br>45 S | 28<br>54 | 15 YL<br>0 | 26<br>0 | 1,536 High Priority Winter | | |
| | Elk | 11 | 5 YL | 29 | 0 YL | 0 | 1,536 Yearlong | | |
| Flint | Deer | 13 | 0 | | 0 | 0 | 960 Yearlong | | |
| | Antelope | 2 | 55 YL | 70 | 10 YL | 13 | 16,192 Substantial Value YL | Lack of water. | |
| Fool Creek 1 | Deer | 53 | 5 YL | 10 | 5 YL | 10 | | | |
| Fool Creek 2 | Deer | 53 | 5 YL | 10 | 5 YL | 10 | | | |
| Freighter | Deer | 62B | 25 W | 14 | 20 W | 11 | 12,288 High Priority Winter | Competition with Winter Sheep for browse. | |
| | Antelope | 2 | 42 YL | 54 | 10 YL | 13 | 15,040 Substantial Value YL | Same, lack of water/distribution. | |
| Gandy | Antelope | 2 | 178 YL | 227 | 30 YL | 38 | 55,744 Substantial Value YL | Competition with summer cattle for forbs, limited water distribution. | |
| | | | | | | | 1,792 Limited Value YL | Same as above. | |
| Garrett | Deer | 14 | 0 | 10 | 0 | 10 | | | |
| Gilson | Deer | 14 | 216 W<br>145 S | 121<br>175 | 216 W<br>145 S | 121<br>175 | 16,768 High Priority Winter<br>4,179 High Priority Summer | Competition with winter sheep for browse..<br>Limited water distribution. | |
| | Elk | 11 | 24 YL | 137 | 0 | 0 | | | |
| | Antelope | 2 | 17 YL | 22 | 5 YL | 10 | 50,274 Substantial Value YL | | |
| Henry Creek | Antelope | 2 | 0 | 0 | 2 | 6 | | | |
| Jakes Canyon | Deer | 54 | 97 W | 55 | 20 YL | 35 | | | |
| Jenny Lind | Deer | 14 | 61 W | 35 | 20 YL | 35 | 4,173 High Priority Winter | | |
| | Elk | 11 | 1 YL | 6 | 0 | 0 | 4,288 High Priority YL<br>1,664 High Priority Summer | | |
| Juab | Deer | 53 | 15 W | 8 | 5 YL | 10 | | | |
| Kane Spring | Antelope | 2 | 26 YL | 33 | 5 YL | 6 | 3,264 Substantial Value | Competition with winter sheep for browse; limited water distribution. | |
| Kimball Creek | Deer | 14 | 108 W<br>1,000 S | 61<br>1207 | 210 YL<br>0 | 370<br>0 | 4,736 High Priority Winter<br>15,744 High Priority Summer<br>2,216 Critical Summer[b] | Limted water distribution.<br>Limited water. | Poor[c] |
| | Elk | 11 | 27 YL | 154 | 24 YL | 128 | 20,096 High Priority YL | Competition with summer cattle for grass/forbs. | |
| | | | 4 S | 13 | 0 | 0 | 2,176 High Priority Summer | Same; limited water. | |
| Klondike | Deer | 54 | 97 W | 55 | 25 YL | 44 | | | |
| Knoll Spring | Antelope | 2 | 0 | 0 | 2 YL | 6 | | | |
| Lady Laird | Deer | 62B | 45 W | 25 | 100 W | 56 | 19,136 High Priority Winter | Competition with winter sheep for browse. | |
| | Antelope | 2 | 168 YL | 214 | 30 YL | 38 | 25,292 Substantial Value YL<br>26,560 Limited Value YL | Same; limited water.<br>Same; limited water. | |

TABLE 2-22 (continued)

| Allotment | Big Game Species | Herd Unit | Prior Stable Number | Prior Stable AUMs of Forage | Current Population Size | Current AUMs of Forage | Acres of habitat | Possible[a] Limiting Factors | Critical Big Game Habitat Condition |
|---|---|---|---|---|---|---|---|---|---|
| Lunt-Latimer | Deer | 14 | 0 | 0 | 0 | 0 | 5,542 High Priority Winter | | |
| | | | | | | | 5,542 High Priority YL | | |
| | Elk | 11 | 4 YL | 23 | 0 | 0 | | | |
| Levan | Deer | 14 | 68 W | 38 | 68 W | 38 | 4,640 High Priority Winter | Competition with winter cattle. | |
| | Elk | 11 | 7 YL | 40 | 7 YL | 41 | 3,353 High Priority YL. | | |
| Little Drum | Deer | 62B | 36 W | 20 | 80 W | 45 | 3,136 High Priority Winter | Competition with winter sheep; lack of water. | |
| | Antelope | 2 | 242 YL | 309 | 30 YL | 38 | 7,302 Substantial Value YL | Competition with winter sheep for browse. | |
| | | | | | | | 75,776 Limited Value YL | Competition with winter sheep for browse. | |
| Lynndyl | Antelope | 2 | 21 YL | 27 | 5 YL | 6 | 11,904 High Priority YL | Limited water/distribution. | |
| Maple Peak | Deer | 13 | 3,379 W | 1,898 | 1,175 YL | 2,078 | 53,760 High Priority Winter | | |
| | | | 1,075 S | 1,297 | 0 | 0 | 2,373 Critical Summer[b] | Summer cattle. | Poor[c] |
| | Antelope | 2 | 52 YL | 66 | 0 | 0 | | Limited water distribution. | |
| Marble Wash | Antelope | 2 | 0 | 0 | 20 YL | 26 | | | |
| McIntyre | Deer | 13 | 25 W | 14 | 200 W | 200 | 3,200 High Priority Winter | Competition with winter cattle for browse. | |
| | | | | | 50 YL | | | | |
| | Antelope | 2 | 64 YL | 82 | 5 YL | 6 | 3,731 Limited Value YL | Same; limited water. | |
| Meadow Creek | Deer | 14 | 116 W | 65 | 100 W | 56 | 198 High Priority Winter | Competition with winter sheep for browse. | |
| | | | | | | | 2,624 High Priority YL | | |
| | Antelope | 2 | 155 YL | 198 | 35 YL | 45 | 3,987 Substantial Value YL | Same; limited water. | |
| Middle Fork | Deer | 14 | 79 W | 44 | 79 W | 44 | | Competition with summer and fall cattle. | |
| | | | 45 S | 54 | 45 S | 54 | 157 Critical Summer[b] | | Poor[c] |
| | Elk | 11 | 8 YL | 46 | 8 YL | 47 | 3,500 Critical Winter | | Poor[c] |
| Mills | Deer | 14 | 79 W | 44 | 40 W | 22 | 4,288 High Priority Winter | Competition with winter cattle for browse | |
| | | | 45 S | 54 | 0 | 0 | | | |
| | Elk | 11 | 8 YL | 46 | 8 YL | 47 | 3,520 High Priority YL | Same as above. | |
| Mountain | Deer | 62A | 104 W | 58 | 100 W | 56 | 2,960 Critical Fawning Area | Class/season of livestock not known. | Fair[c] |
| | | | | | | | 14,400 Critical Winter | | |
| | | | 612 S | 739 | 200 S | 241 | 11,240 High Priority Summer | | |
| | Bighorn Sheep | | 26 W | 24 | 1 W | 1 | 9,300 High Priority Winter | | |
| | | | 96 S | 124 | 0 | 0 | | | |
| Nelson | Deer | 13 | 0 | 0 | 0 | 0 | 320 High Priority Winter | | |
| | Antelope | 2 | 27 YL | 34 | 10 YL | 13 | 4,102 High Priority YL | | |
| Nephi Bench | Deer | 14 | 14 W | 8 | 14 W | 16 | 1,824 High Priority Winter | | |
| | | | | | | | 350 Critical Summer[b] | | |
| | Elk | 11 | 2 YL | 11 | 0 | 0 | 1,664 High Priority YL | | Fair[c] |
| North Scipio | Deer | 53 | 73 W | 41 | 35 YL | 72 | | | |
| Oak City | Deer | | 150 W | 84 | 150 W | 147 | 760 Critical Winter[e] | Lacks thermal cover. | Poor[c] |
| | | | 10 YL | 18 | 10 YL | 0 | | | |
| Okelberry | Deer | 14 | 94 W | 105 | 100 W | 105 | 9,728 High Priority Winter | | |
| | | | 745 S | | 150 S | | 3,904 High Priority Summer | Competition with summer cattle for forbs. | |
| | | | | | | | 311 Critical Summer[b] | | Poor[c] |
| | Elk | 11 | 18 YL | 103 | 18 YL | 103 | 13,184 High Priority YL | | |
| | | | 2 S | 7 | 0 S | 0 | | | |
| Paint Mine | Deer | 14 | 47 S | 26 | 47 S | 26 | 2,944 High Priority Winter | Competition with winter cattle; spring cattle use. | |
| | Elk | 11 | 5 YL | 29 | 0 | 0 | 2,752 High Priority YL | Spring cattle use. | |
| Partoun | Deer | 62A | 907 W | 510 | 300 W | 169 | 25,088 High Priority Winter | Competition with summer and fall cattle. | Poor[c] |
| | | | 751 S | 906 | 100 S | 121 | 11,008 High Priority Summer | | |
| | | | | | | | 2,025 Critical Fawning Area | | Fair[d] |
| | Antelope | 2 | 0 | 0 | 50 YL | 64 | 59,456 Substantial Value YL | | |
| | | | | | | | 12,755 Limited Value YL | | |
| | Bighorn Sheep | | 72 W | 65 | 1 W | 1 | 1,200 Substantial Value Summer | | |
| | | | 4 S | | | | 14,000 Substantial Value Winter | | |
| Red Butte | Deer | 53 | 112 W | 63 | 20 YL | 35 | | Spring cattle use. | |
| | Elk | 11 | 16 W | 0 | 16 W | 53 | | | |
| Riley Spring | Deer | 14 | 40 W | 22 | 40 W | 22 | 3,801 High Priority Winters | Summer and winter cattle. | |
| | | | 90 S | 109 | 20 S | 24 | 933 Critical Summer[b] | | Poor[c] |
| | Elk | | 5 YL | 29 | 0 | 0 | 3,840 High Priority Summer | | |
| Riverbed | Deer | 13 | 340 W | 191 | 100 W | 56 | 16,480 High Priority YL | Spring sheep. | |
| | | | 136 YL | 240 | 20 S | 24 | 230 Critical Summer[b] | | Poor[c] |
| | Antelope | 2 | 163 YL | 208 | 60 YL | 77 | 54,080 High Priority YL | Competition with spring sheep for browse; limited water distribution. | |

TABLE 2-22 (continued)

| Allotment | Big Game Species | Herd Unit | Prior Stable Number | Prior Stable AUMs of Forage | Current Population Size | Current AUMs of Forage | Acres of habitat | Possible[a] Limiting Factors | Critical Big Game Habitat Condition |
|---|---|---|---|---|---|---|---|---|---|
| Rocky Ford | Deer | 14 | 112 W | 63 | 20 YL | 35 | 9,024 High Priority Winter | | |
| | | | 45 S | 54 | 0 | 0 | 1,556 Critical Summer | Summer Cattle. | Poor[c] |
| | Elk | 11 | 11 YL | 63 | 0 | 0 | 9,088 High Priority YL | Summer Cattle. | |
| Round Valley | Deer | 54 | 126 W | 71 | 30 YL | 62 | | Winter cattle/browse | |
| | Elk | 11 | 4 YL | 23 | 4 YL | 25 | 2,000 Critical Winter | | Fair[c] |
| Sage Valley 16 | Deer | 14 | 61 W | 34 | 50 W | 28 | 5,869 High Priority Winter | Winter/spring cattle. | |
| | | | | | 20 S | 24 | 78 Critical Summer[b] | | Fair[c] |
| | Elk | 11 | 6 YL | 34 | 6 YL | 35 | 100 Critical Winter | | Poor[c] |
| | | | | | | | 5,785 High Priority YL | | |
| Sage Valley 17 | Deer | 14 | 133 W | 75 | 50 W | 28 | 12,505 High Priority Winter | Winter/spring cattle. | |
| | | | 580 S | 700 | 20 S | 24 | | | |
| | Elk | 11 | 14 YL | 80 | 12 YL | 69 | | | |
| Salt Creek | Deer | 42 | 750 W | 421 | 150 W | 84 | 3,773 Critical Winter | Lack of key win. forage. | Poor |
| | | | 580 S | 700 | 120 S | 145 | 15,680 High Priority Summer | | |
| | Elk | 11 | 14 YL | 80 | 12 YL | 69 | 15,100 High Priority Winter | | |
| Sand Pass | Deer | 62B | 44 W | 25 | 40 W | 22 | 467 Critical Summer[b] | | Poor[c] |
| | Antelope | 2 | 104 YL | 133 | 5 YL | 6 | 15,168 Substantial Value YL | Competition with winter/-<br>spring sheep/browse;<br>limited water distribution. | |
| | | | | | | | 21,056 Limited value YL | | |
| Sevier River | Deer | 14 & | 68 W | 38 | 40 YL | 70 | 2,880 High Priority Winter | Spring/summer/fall cattle. | |
| | | 53 | 45 S | 54 | 0 | 0 | | | |
| | Elk | 11 | 3 YL | 18 | 0 | 0 | 21,056 Limited Value YL | | |
| Shearing | Deer | 13 & | 158 W | 88 | 158 W | 89 | 6,982 High Priority Winter | Spring sheep/browse. | |
| | | 14 | 25 YL | 44 | 0 | 0 | 311 Critical Summer[b] | | |
| | Elk | 11 | 8 YL | 46 | 0 | 0 | | | Poor[c] |
| | Antelope | 2 | 38 YL | 49 | 0 | 0 | | | |
| Sheep | Antelope | 2 | 69 YL | 88 | 10 YL | 13 | 13,785 Substantial Value YL | Lack of water | |
| | | 0 | 0 | 0 | 0 | 0 | 24,832 Limited Value YL | Spring sheep/winter cattle;<br>lack of water. | |
| Sheeprocks | Deer | 13 | 1,136 W | 638 | 650 YL | 1,148 | 26,713 High Priority Winter | Summer/fall sheep/cattle. | |
| | | | 1,238 S | 1,494 | 0 | 0 | 1,789 Critical Summer[b] | | Poor[c] |
| | | | | | | | 506 Critical Fawning | | Fair |
| | Antelope | 2 | 17 YL | 22 | 0 | 0 | | | |
| Smelter Mountain | Antelope | 2 | 213 YL | 272 | 15 YL | 19 | 17,981 Substantial Value YL | Limited water distribution. | |
| Smith Creek | Antelope | 2 | 55 YL | 70 | 0 | 0 | 19,981 Substantial Value YL | Lack of water. | |
| Snadge Hollow | Deer | 54 | 242 W | 136 | 25 YL | 44 | | Spring cattle. | |
| Spring Canyon | Deer | 14 | 140 W | 79 | 70 YL | 123 | 9,280 High Priority Winter | Summer/winter cattle. | |
| | | | 182 S | 220 | 0 | 0 | 4,224 High Priority YL | | |
| | Elk | 11 | 14 YL | 80 | 14 YL | 82 | 4,600 Critical Winter | | Poor[c] |
| Spor Mountain | Deer | 62A | 43 YL | 76 | 40 YL | 71 | 584 Critical Summer[b] | | Poor[c] |
| | | | | | | | 13,440 High Priority YL | Winter and spring sheep. | |
| | Antelope | 2 | 160 YL | 204 | 20 YL | 26 | 50,624 High Priority YL | Winter and spring sheep;<br>limited water distribution. | |
| Stone | Deer | 54 | 213 YL | 357 | 25 YL | 52 | | | |
| Stone Quarry | Deer | 14 | 61 W | 34 | 61 W | 34 | 5,427 High Priority Winter | Spring sheep; summer cattle. | |
| | | | 91 S | 110 | 25 S | 30 | 5,184 High Priority YL | | |
| | Elk | 11 | 7 YL | 40 | 7 YL | 41 | | | |
| Summit | Deer | 54 | 158 W | 89 | 50 YL | 104 | 2,300 Critical Winter | Spring cattle/fall cattle. | Poor[c] |
| Sugarville | Antelope | 2 | 80 YL | 102 | 10 YL | 13 | 5,696 Substantial Value YL | Limited water distribution. | |
| | | | | | | | 55,296 Limited Value YL. | Limited water distribution. | |
| Swazy Knoll | Deer | 62B | 22 W | 12 | 50 W | 28 | 11,392 High Priority YL | | |
| | Antelope | 2 | 157 YL | 200 | 40 YL | 51 | 49,600 Substantial Value YL | Winter/spring sheep. | |
| | | | | | | | 1,344 Limited Value YL | | |
| Table Mountain | Deer | 13 | 220 W | 134 | 100 W | 56 | 3,328 High Priority YL | | |
| | | | | | | | 147 Critical Summer[b] | Winter spring sheep | Poor[c] |
| | Antelope | 2 | 129 YL | 165 | 40 YL | 51 | 36,160 Substantial Value YL | Competition with winter<br>and spring sheep. Limited<br>water. | |
| atow | Deer | 62B | 208 W | 117 | 950 W | 540 | 61,696 High Priority Winter | Winter/spring sheep; summer<br>cattle. | |
| | | | 163 YL | 288 | 0 | 0 | | | |
| | Antelope | 2 | 163 YL | 208 | 25 YL | 32 | 32,192 Substantial Value YL | Competition with winter and<br>spring sheep; limited water<br>distribution. | |
| | | | | | | | 9,216 Limited value YL | | |

TABLE 2-22 (concluded)

| Allotment | Big Game Species | Herd Unit | Prior Stable Number | Prior Stable AUMs of Forage | Current Population Size | Current AUMs of Forage | Acres of habitat | Possible[a] Limiting Factors | Critical Big Game Habitat Condition |
|---|---|---|---|---|---|---|---|---|---|
| Tinic Pastures | Deer | 14 | 0 | 0 | 10 YL | 21 | 768 High Priority YL | Spring/summer cattle. | |
| Thousand Peaks | Deer | 62A | 893 W | 471 | 0 | 0 | 19,308 High Priority Winter | Winter/spring sheep/cattle. | |
| | | | 902 S | 1,089 | 0 | 0 | 1,207 Critical Summer[b] | Winter/spring sheep/cattle. | Fair |
| | | | 64 YL | 113 | 450 YL | 796 | 6,150 Critical Fawning Area | Winter/spring sheep/cattle. | Fair |
| | Antelope | 2 | 106 YL | 135 | 320 YL | 409 | 216,448 Substantial Value YL | Winter/spring sheep/cattle. | |
| | Bighorn Sheep | | 58 W | 53 | 20 YL | 44 | 124,160 Limited Value YL | Winter/spring sheep/cattle. | |
| | | | 173 S | 220 | 0 | 0 | 10,900 Substantial Value Sum. | | |
| | | | 29 YL | 63 | 0 | 0 | 11,000 Substantial Value Win. | | |
| Topaz | Antelope | 2 | 2 YL | 3 | 0 | 0 | 29,376 Substantial Value YL | | |
| Tule Spring | Deer | | 0 | 0 | 0 | 0 | 3,008 High Priority Winter | | |
| | Antelope | 2 | 49 YL | 62 | 10 YL | 13 | 10,956 Substantial Value YL<br>5,651 Limited Value YL | Competition with winter spring sheep; lack of water. | |
| Tule Valley | Antelope | 2 | 0 | 0 | 0 | 0 | 17,025 Limited Value YL | Season/class of livestock not known; limited water distribution. | |
| Warm Creek | Antelope | 2 | 0 | 0 | 15 YL | 19 | | | |
| Washboard | Deer | 42 | 0 | 0 | 20 YL | 35 | 454 High Priority Winter | | |
| | Elk | 11 | 0 | 0 | 10 W | 24 | | | |
| West Mona | Deer | 14 | 155 W | 87 | 100 YL | 177 | 1,439 Critical Winter | Competition with spring cattle. | Fair |
| | | | 109 S | 132 | 0 | 0 | 9,120 High Priority Winter<br>2,880 Critical Summer[b] | | Poor[c] |
| | Elk | 11 | 19 YL | 109 | 7 YL | 58 | 16,832 High Priority YL | | |
| Wild Horse | Deer | 62A | 159 YL | 281 | 40 W | 22 | 937 Critical Summer[b] | Competition with winter | Poor[c] spring |
| | | | | | 25 S | 25 | | | |
| | Antelope | 2 | 111 YL | 142 | 40 YL | 51 | 3,904 Substantial Value YL<br>40,448 Limited Value YL | Same; limited water distribution. | |
| Yuba | Deer | 42 | 145 W | 81 | 10 YL | 21 | 1,751 Critical Summer[b] | Summer/winter cattle. | Poor[c] |
| | Elk | 11 | 0 | 0 | 10 W | 24 | | | |
| Twelve B | -- | -- | -- | -- | -- | -- | | | |
| Valley Mountain | Deer | 54 | 97 W | 54 | 10 YL | 21 | | | |

Note: Conversion factors that were used to determine AUMs of forage needed for wildlife are as follows:

| | Winter | Summer | Yearlong |
|---|---|---|---|
| Deer | 8.8 | 5.8 | |
| Antelope | -- | -- | 9.4 |
| Elk | 2.1 | -- | -- |
| Bighorn Sheep | -- | -- | 5.5 |

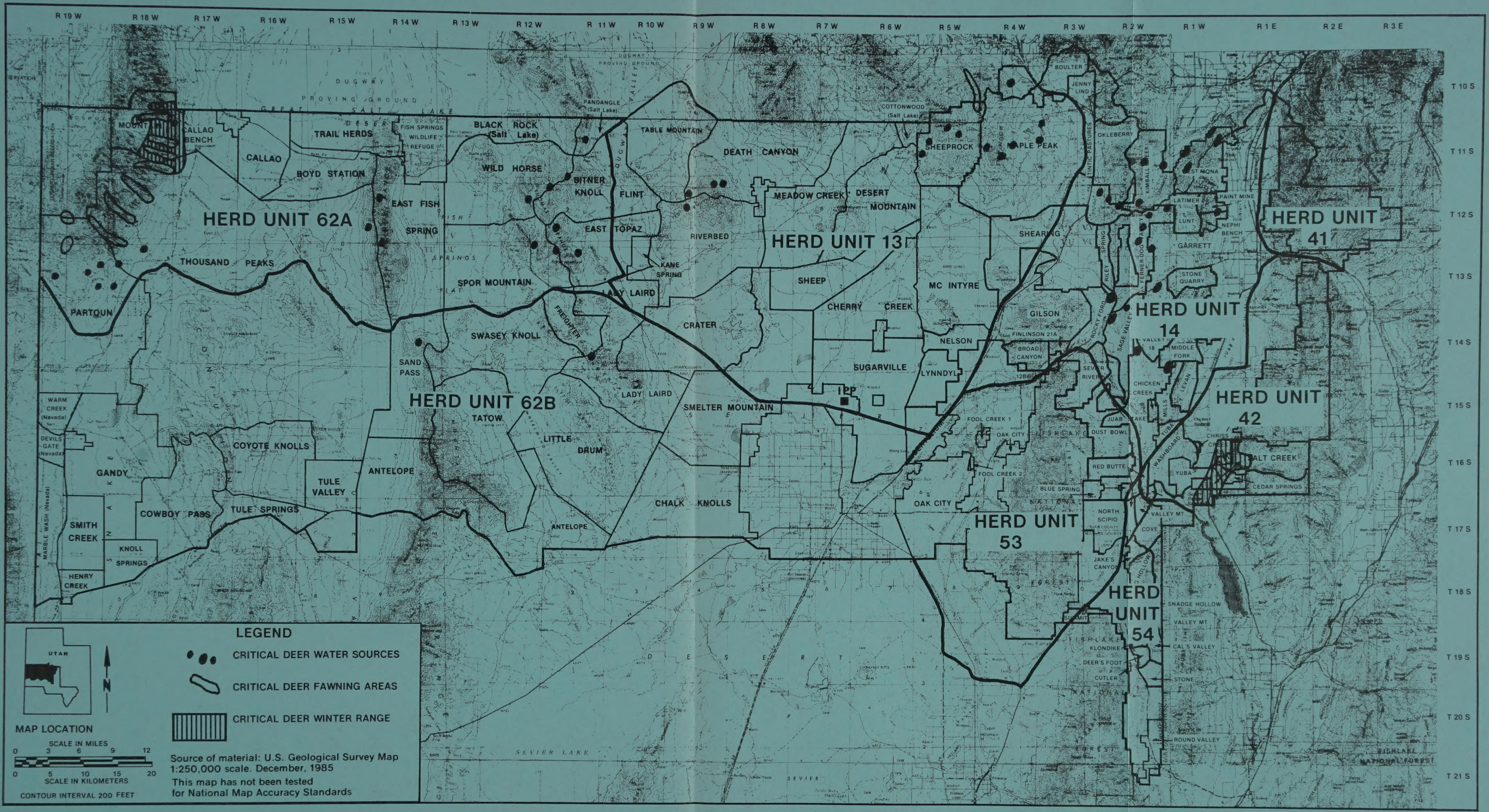
[a] These factors are considered in addition to limited summer forage.

[b] Critical due to water availability.

[c] UDWR, 1985b.

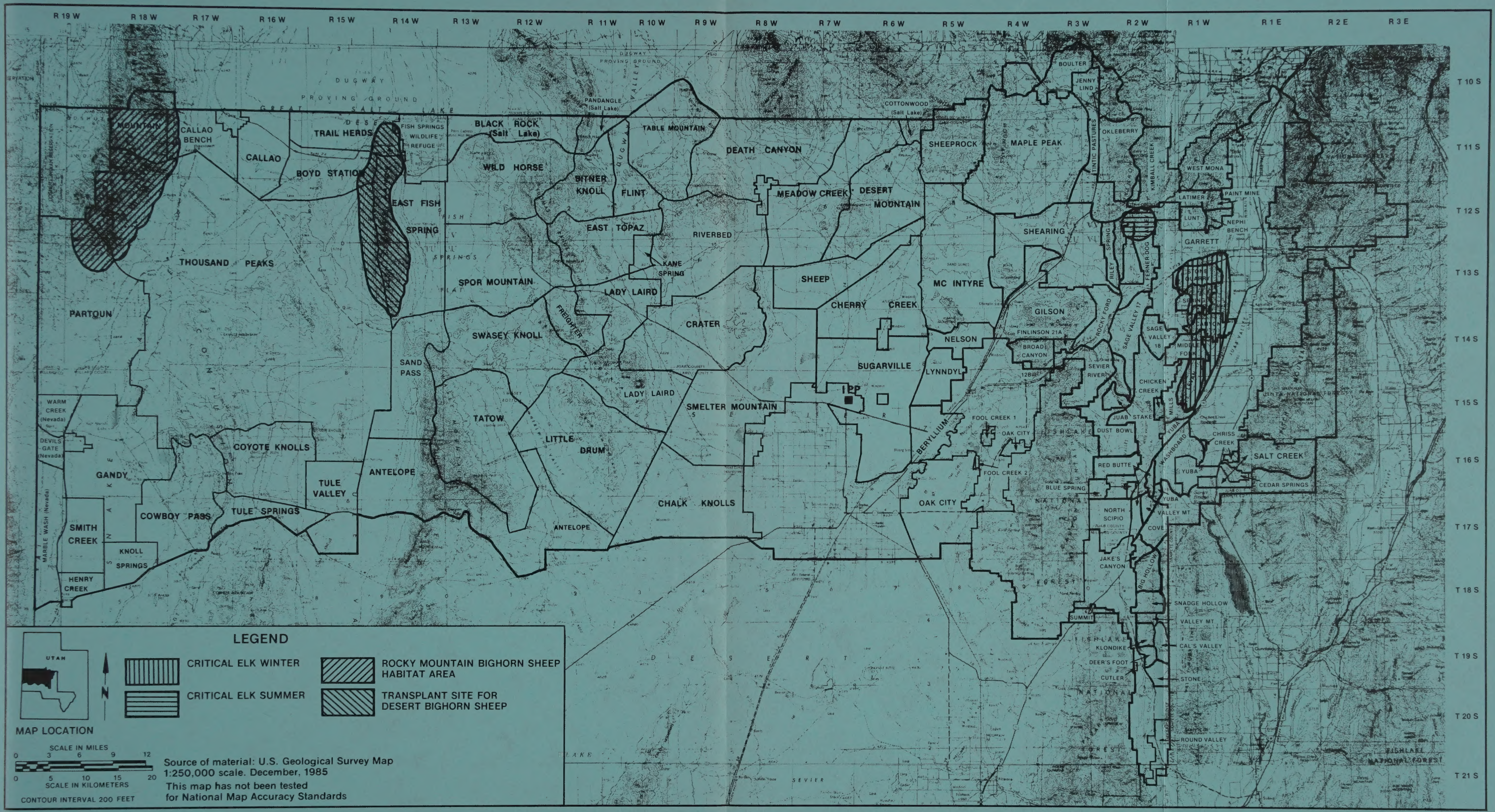
[d] Private Land.

[e] Includes two unalloted 80 acre parcels.



Source of material: U.S. Geological Survey Map 1:250,000 scale. December, 1985
This map has not been tested for National Map Accuracy Standards

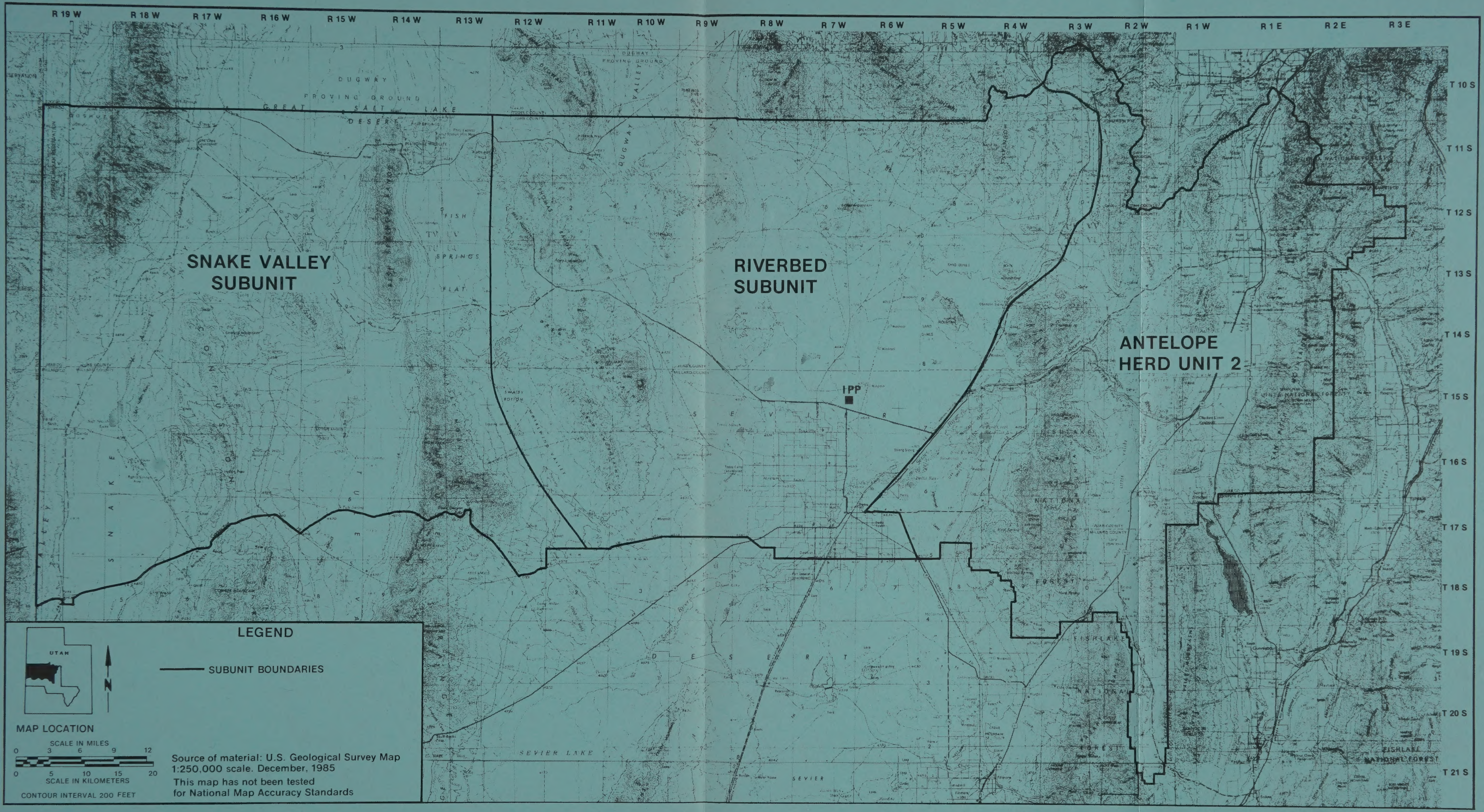
FIGURE 2- 10
CRITICAL DEER AREAS



Source of material: U.S. Geological Survey Map 1:250,000 scale. December, 1985
This map has not been tested for National Map Accuracy Standards

FIGURE 2- 11

CRITICAL ELK AND BIGHORN SHEEP HABITAT AREAS



Source of material: U.S. Geological Survey Map 1:250,000 scale. December, 1985
This map has not been tested for National Map Accuracy Standards

FIGURE 2- 12
ANTELOPE HERD UNIT 2 BOUNDARIES

the eastern portion of HRRA along the Wasatch-Nebo front. However, number of birds is low, and there is no known nesting in the area. Within Utah, there is no officially designated bald eagle or peregrine falcon critical habitat, as defined by the Endangered Species Act (Bohwahnn, 1981).

### SENSITIVE ANIMAL SPECIES

There are seven sensitive species in the planning area: Bonneville cutthroat trout, least chub, a new species of daces, golden eagle, Swainson's hawk, ferruginous hawk, and Swasey Spring pocket gopher.

The Bonneville cutthroat trout historically was found in waters throughout the Bonneville Basin. Today they occur in two streams in the resource area: Trout Creek and Birch Creek, located on the east slopes of the Deep Creek Mountains. The lack of good pool habitat, low mineral content (alkalinity) of the streams, and hybridization with introduced rainbow trout appear to be the more important limiting factors. UDWR presently has a transplant program to reintroduce this species into other streams in the Deep Creek Mountains.

The least chub, also historically found in the Bonneville Basin, is now living in several springs throughout the resource area. Population status and trend for this species are not known at this time. Two factors that contribute toward limiting the least chub are the stocking of non-native, predacious fish and livestock grazing of the riparian zone.

Currently, the BLM has no data on the Swasey Spring pocket gopher or the new species of dace.

The golden eagle is a year-round resident of the planning area; however, relative abundance is difficult to determine. Data from mid-winter raptor surveys suggest that the golden eagle populations have remained static over the past 5 years.

The distribution and abundance of the Swainson's hawk and ferruginous hawk are not known; however, these species may breed in the planning area and are banded in the area annually by UDWR.

### RIPARIAN HABITAT

Riparian habitat in the planning area is associated with perennial streams, desert wetlands, and floodplains.

The location of riparian habitat is shown in Tables 2-20 and 2-21; condition, trend, and size is also shown. Historically, the riparian habitat has been adversely impacted by livestock grazing, mineral exploration and mining, ORV use, and water diversion.

## Elements of the Plan

### GOALS AND OBJECTIVES

Manage wildlife habitat to favor a diversity of game and nongame species. Provide forage for current big game numbers and prior stable or long-term management goal numbers in the future should populations increase and habitat improvements occur (Table 2-22). Improve habitat in poor condition on crucial deer winter range. Protect against the loss of crucial habitat from encroachment by incompatible uses. Improve riparian/fisheries habitat in areas currently in poor and fair condition. Avoid deterioration of riparian/fisheries habitat currently in fair or good condition. Protect all T&E and sensitive species habitats.

**General Wildlife**

*Forage Allocation*

Forage would be available to maintain current wildlife numbers and permit continued population growth as follows: mule deer, 9,964 AUMs; elk, 1,063 AUMs; antelope, 1,581 AUMs; and bighorn sheep, 46 AUMs (Appendix 8).

*Habitat Management Plans (HMPs)*

1. Update and combine the Trout Creek and Deep Creek Mountains HMPs and include a portion for the Rocky Mountain bighorn sheep.
2. Develop a HMP for management of least chub and the new dace.
3. Modify the West Desert HMP to include the reintroduction of desert bighorn sheep on Fish Springs Mountain.

*Improve Wildlife Habitat*

Coordinate wildlife habitat with soil and vegetation conditions (Figure 2-9).

**Mule Deer**

*Herd Unit 13*

1. Develop seven (or more) springs in critical summer habitat areas. The precise locations and priorities will be determined through a field study.
2. Monitor critical summer habitat and determine the limiting factors.
3. Determine impacts of livestock grazing on critical and high priority habitat.
4. Modify south boundary fence on Riverbed Allotment to comply with BLM Manual 1737 Type A.
5. Critical winter, summer, and fawning habitat should be placed in Category 2 with a seasonal restriction to exploration and drilling from December through April and May through November, respectively.
6. Leave 3 to 5 acres of pinyon-juniper islands for deer cover in treatment areas and leave travel lanes on the Maple Peak and Sheeprock allotments if a large chaining is implemented. Coordinate closely with livestock interests when the 5,000 acres are improved. For maximum wildlife benefits, a pasture management system should be followed which allows complete rest of some of the pastures during summertime.

*Herd Unit 14*

1. Monitor critical summer habitat and determine the limiting factors. Improve 8,200 acres of critical habitat on Ferner Dog Valley, Kimball Creek, Okelberry, Riley Spring, Rocky Ford, Nephi Bench, and Shearing, plus any other identified through further monitoring.

*Herd Unit 42*

1. Monitor critical winter habitat on Chriss Creek, Cedar Springs, Salt Creek, and Yuba allotments.
2. Monitor critical summer allotments.
3. Determine impact of livestock grazing on browse species.
4. Critical winter and summer habitat should be placed in category 2 with a seasonal restriction on exploration and drilling from December through April and May through November, respectively. Improve 7,300 acres of critical winter habitat on Cedar Spring, Salt Creek, and Yuba, now in poor condition, plus any others identified through further monitoring.

*Herd Unit 42*

1. Monitor critical winter habitat on Chriss Creek, Cedar Springs, Salt Creek, and Yuba allotments.
2. Monitor critical summer allotments.
3. Determine impact of livestock grazing on browse species.
4. Critical winter and summer habitat should be placed in category 2 with a seasonal restriction on exploration and drilling from December through April and May through November, respectively.
5. Improve the critical winter habitat for this herd unit on those allotments identified in Alternative B, plus any others identified through further monitoring.

*Herd Unit 54*

1. Monitor critical winter habitat in the Summit Allotment and determine limiting factors.
2. Crucial winter habitat should be placed in oil and gas Category 2 with a seasonal restriction on exploration and drilling from December through April.

*Herd Unit 62A*

1. Hand thin 200 acres of aspen and conifer forest inside the WSA and reseed with native forbs and grasses.
2. Modify fences to comply with BLM Manual 1737 Type A on an actual need basis following monitoring.

3. Reverse downward trend by removing encroaching juniper and pinyon forest on winter range.

4. Place critical winter and critical summer habitat in category 2 with a seasonal restriction on exploration and drilling from December through April and May through November, respectively.

5. Improve 3,000 acres of critical summer habitat, primarily through water development on Bitner Knoll, Callao Bench, East Fish Spring, East Topaz, Spor Mountain, and Wild Horse that is in poor condition.

*Herd Unit 62B*

1. Develop water sources in the Sand Pass, Freighter, and Lady Laird allotments.

2. Determine limiting factors of critical summer habitat in the Sand Pass, Freighter, and Lady Laird allotments.

3. Place a seasonal exploration and drilling restriction on critical summer habitat on a case-by-case basis where an adverse impact could otherwise occur.

**Elk**

*Herd Unit 11*

1. Determine limiting factors for critical winter and summer habitat.

2. Place a seasonal exploration and drilling restriction on critical summer habitat on a case-by-case basis where an adverse impact could otherwise occur.

3. Improve 11,000 acres of critical winter/summer habitat on Ferner Dog Valley, Middle Fork, and Spring Canyon allotments.

4. Determine additional suitable elk habitat, including potential reseeding areas (see Vegetation and Range section).

**Antelope**

*Herd Unit 2*

1. Modify six wells as identified in Table 2-23 to provide water for antelope during the summer.

2. Install 12 guzzlers as previously identified.

3. Modify fences to comply with BLM Manual 1737 Type A on an actual need basis following monitoring (see Table 2-24).

4. Implement a rest-rotation grazing system on spring sheep allotments where grazing conflicts with wildlife are identified.

**Bighorn Sheep**

1. Install three guzzlers in the Fish Spring Mountain Range.

2. Determine limiting factors for bighorn sheep in Fish Springs Range.

3. Determine limiting factors for bighorn sheep in the Deep Creek Mountains.

4. Do not allow domestic sheep grazing over 7,000 feet elevation which is near the upper edge of the pinyon-juniper vegetation in the Fish Spring and Deep Creek ranges.

**Riparian Habitat**

1. Inventory all riparian habitat within 3 years of plan completion and determine limiting factors for Deep Creek Mountains. Improve those stream portions in poor and fair conditions.

2. Determine the condition and trend on five West Desert springs. They are Antelope, Baker, Hot Springs, Cane Springs, Swasey Springs, and Topaz Slough.

3. Change season of use in the Gandy Allotment by eliminating spring grazing in order to reverse a downward trend of riparian habitat along the Salt Marsh Lake.

4. Place all riparian habitat in oil and gas category 3.

5. Improve riparian habitat of Tule Spring and Twin Spring.

**6. Improve riparian habitat of Tule Spring and Twin Spring.**

**Endangered and Sensitive Species**

Current BLM policy is to conserve Federally and State listed T&E animals by developing plans for the protection of those species.

1. Reconstruct drop log structures in order to establish pool habitat for Utah cutthroat trout in Birch, Trout, Granite, Red Cedar, Indian Farm, and Tom's Creek.

2. Determine limiting factors for least chub in the Salt Marsh Lake Complex, Tule Spring, Willow Spring, Coyote Spring, and Cold Spring.

3. Determine importance and status of new species of dace and provide needed habitat protection.

4. Designate all eight streams in the Deep Creek Mountains as ACEC for Bonneville cutthroat trout.

TABLE 2-23

Well Modifications and Guzzler Development

| Well Improvement and Location | Changes Needed |
|---|---|
| Cline Well 1295<br>T. 15 S., R. 15 W., Sec. 29 | Maintain a constant supply of water from May to October, in stall access and escape ramps. |
| Hole-in-the Wall Well<br>T. 13 S., R. 16 W., Sec. 6 | Replace trough, install access and escape ramps. Maintain water from May to October, install wildlife trough 400 years from well. |
| Indian Trail Well 2122<br>T. 13 S., $. 16 W., Sec. 34 | Install new pump and motor, install a wildlife trough 200 or more yards from well, maintain water from May to October. |
| Well 56, 4306<br>T. 13 S., R. 15 W., Sec. 23 | Install access and escape ramps, maintain a water supply from May to October, and install a wildlife trough 400 yards from well. |
| Well 58 4307<br>T. 15 S., R. 16 W., Sec. 11 | Same as for Well 56. |
| West Swasey Well 2072 | Same as for Well 56. |

| Guzzler Development Location | Allotment |
|---|---|
| T. 17 S., R. 17 W., Sec. 17, NE | Cowboy Pass |
| T. 15 S., R. 17 W., Sec. 33, SE | Thousand Peaks |
| T. 17 S., R. 17 W., Sec 4. SW | Cowboy Pass |
| T. 16 S., R. 17 W., Sec 16, SE | Cowboy Pass |
| T. 15 S., R. 18 W., Sec. 1, NE | Thousand Peaks |
| T. 15 S., R. 18 W., Sec. 23, NE | Thousand Peaks |
| T. 13 S., R. 17 W., Sec. 32, SE | Thousand Peaks |
| T. 14 S., R. 16 W., Sec. 17, SW | Thousand Peaks |
| T. 14 S., R. 15 W., Sec. 28, SW | Thousand Peaks |
| T. 14 S., R. 15 W., Sec. 4, SW | Thousand Peaks |
| T. 13 S., R. 15 W., Sec. 24, SE | Thousand Peaks |
| T. 16 S., R. 14 W., Sec. 24, NE | Antelope |

TABLE 2-24

Fence Modifications

| Name | JDR Number | Spacing | Change To |
|---|---|---|---|
| East Ibapah Appeal | 0324 | 8-8-8-8-10 | 16-10-10-10-10 |
| West Ibapah Appeal | 0327 | 8-8-8-8-13 | 16-10-10-10-10 |
| Goshute Fire | 0337 | 10-10-10-10 | 16-10-10-10-10 |
| Deep Creek Seeding 1 | 0341 | 10-10-10-12 | 16-10-10-10-10 |
| Goshute Fire Fence 2 | 0372 | 12-10-10-10 | 16-10-10-10-10 |
| Goshute Reservation | 4005 | 12-12-10-10 | 16-10-10-10-10 |
| Pinyon Flat Allotment | 4052 | 16-16-8-12 | 16-10-10-10-10 |
| Ibapah Seeding | 4103 | 16-6-8-12 | 16-10-10-10-10 |
| South Overland Canyon | 4126 | Lower 16-8-8-12<br>Upper 16-13-13 | 16-10-10-10-10<br>16-10-10-10-10 |

5. Designate 3,360 acres of least chub habitat as ACEC.

## SUPPORT REQUIREMENTS

In order to implement the proposed habitat management plans and the protection of riparian/fisheries habitat, several support needs and assistance by other resource programs will be needed. The support of a Fisheries Biologist will be required for inventory, analysis, developing plans, and monitoring. Clerical support will be necessary during the development and writing phase of the HMPs prior to construction of projects or developments. It will also be necessary to ensure that land treatments or developments are not proposed for areas identified for lands disposal. Engineering and contracting support will be required for project design and construction. Support will also be required from the minerals, cultural, range, watershed, and visual resource programs prior to development construction.

Coordination with UDWR will be required during activity plan development, implementation of habitat improvement projects, and habitat monitoring and yearly range evaluations. Coordination and consultation will be required where proposed projects are adjacent to or would affect U.S. Forest Service or State lands. Coordination with the range program is essential where adjustments or modification of livestock management may be necessary to meet objectives for both habitat management plans and allotment management plans.

# WILD HORSES

## Introduction

The HRRA contains two herd management areas (HMA): Confusion and Swazey. Both HMAs are discussed below and Figure 2-13 delineates their boundaries.

### CONFUSION HMA

This HMA consists of approximately 235,005 acres and encompasses parts of four grazing allotments: Thousand Peaks, Coyote Knolls, Cowboy Pass, and Gandy. These allotments are generally located in the southwestern portion of the resource area. Two of these allotments (Thousand Peaks and Gandy) contain 35,470 acres of habitat crucial to approximately 60 wild horses, currently residing in the HMA. Crucial habitat is defined as those areas that provide the three basic life requirements of food, water, and shelter. Summer use is limited to those areas where water is available and where steep, rugged topography provides isolation and protection from human activities. The Thousand Peaks Allotment is grazed by both sheep and cattle. The Coyote Knolls and Cowboy Pass allotments are grazed by sheep. The Gandy Allotment is grazed by cattle. The entire area is accessible for use by wild horses, livestock, and a few antelope. The present range and horse conditions on the Confusion HMA are considered good at this time. Each wild horse consumes approximately 1 AUM of forage per month; therefore, a forage allocation of 1,380 AUMs is required annually to maintain an optimum herd of 115 head. The summer and winter wild horse ranges are in the same area. Some areas, used during the winter, would not be used without snow. However, the majority of horse use is all contained within the HMA between feeding areas, several springs, and two reservoirs.

The herd is increasing at about 15 percent per year. In the past when the population exceeded 115 horses, they were trapped and reduced to approximately 70 head. Trapping is expected to occur approximately every 5 years. By reducing the herd to 70 head every 5 years, forage should always be adequate even during drought periods, as occurred in 1976, to satisfy the wild horse needs.

### SWASEY HMA

This HMA consists of approximately 120,113 acres and encompasses parts of four grazing allotments: Tatow, Swasey Knoll, Antelope, and Sand Pass. These allotments are generally located in the southwest portion of the resource area. All of these allotments contain approximately 26,872 acres of habitat crucial to approximately 110 wild horses, currently residing in the HMA. These allotments are grazed by sheep in the winter and a small herd of cattle in the summer season. A few antelope are in the area and about 200 mule deer use the area during the winter time. The present range and horse conditions on the Swasey HMA are considered good at this time. A forage allocation of 1,200 AUMs is required to maintain an optimum herd of 100 head. The summer and winter ranges consist of the same area. There are times when excess snowfall forces the horses to move to lower elevations, but most use is confined in the HMA to the feeding areas, 10 springs, and a few reservoirs.

Current inventory information indicates that a viable herd of 100 could be maintained with no serious competitive forage conflicts with livestock or wildlife. The herd is increasing at about 15 percent per year. In the past when the population exceeded 100 horses, they were trapped and reduced to about 60 head. Trapping is expected to occur approximately every 5 years. By reducing the herd to 60 head every 5 years, forage should be adequate even during drought to satisfy the wild horse needs.

From a statewide perspective, BLM estimates the total number of wild horses currently using public lands to be 1,350 horses. Approximately 170 horses are presently using the two HMAs; this number represents approximately 13 percent of all wild horses in the State. A capture and removal program took place in the summer of 1985, reducing the herd on the Confusion HMA to approximately 60 horses. Another program is anticipated in the Swasey HMA to reduce this herd to approximately 60 head.

The Wild Horse and Burro Act of 1971 mandates that BLM consider wild free-roaming horses equally with other resource values in developing resource management plans (RMPs). This includes providing sufficient forage to maintain a healthy population at the level determined desirable through the multiple-use planning system.

## Elements of the Plan

### GOALS AND OBJECTIVES

Manage the Swasey and Confusion Mountain wild horse herds in accordance with the Wild Horse and Burro Act, PL-92-195.

Manage the wild horse herds in the short term to maintain the current viability of the herd. (This will require the periodic removal of wild horses.)

### INVENTORY AND MONITORING

Initiate and compile inventory/monitoring studies to more precisely determine the following characteristics of the herd and its habitat: (1) accurate population numbers; (2) age and sex ratio; (3) social structure; and (4) general physical conformation and condition of animals.

### ALLOCATION

The Confusion HMA currently supports 60 horses and the Swasey HMA currently supports 110 horses. An allocation of 2,580 AUMs is required to maintain the herd at its optimum level of 215 head (115 head and 1,380 AUMs in the Confusion HMA; 100 head and 1,200 AUMs in the Swasey HMA).

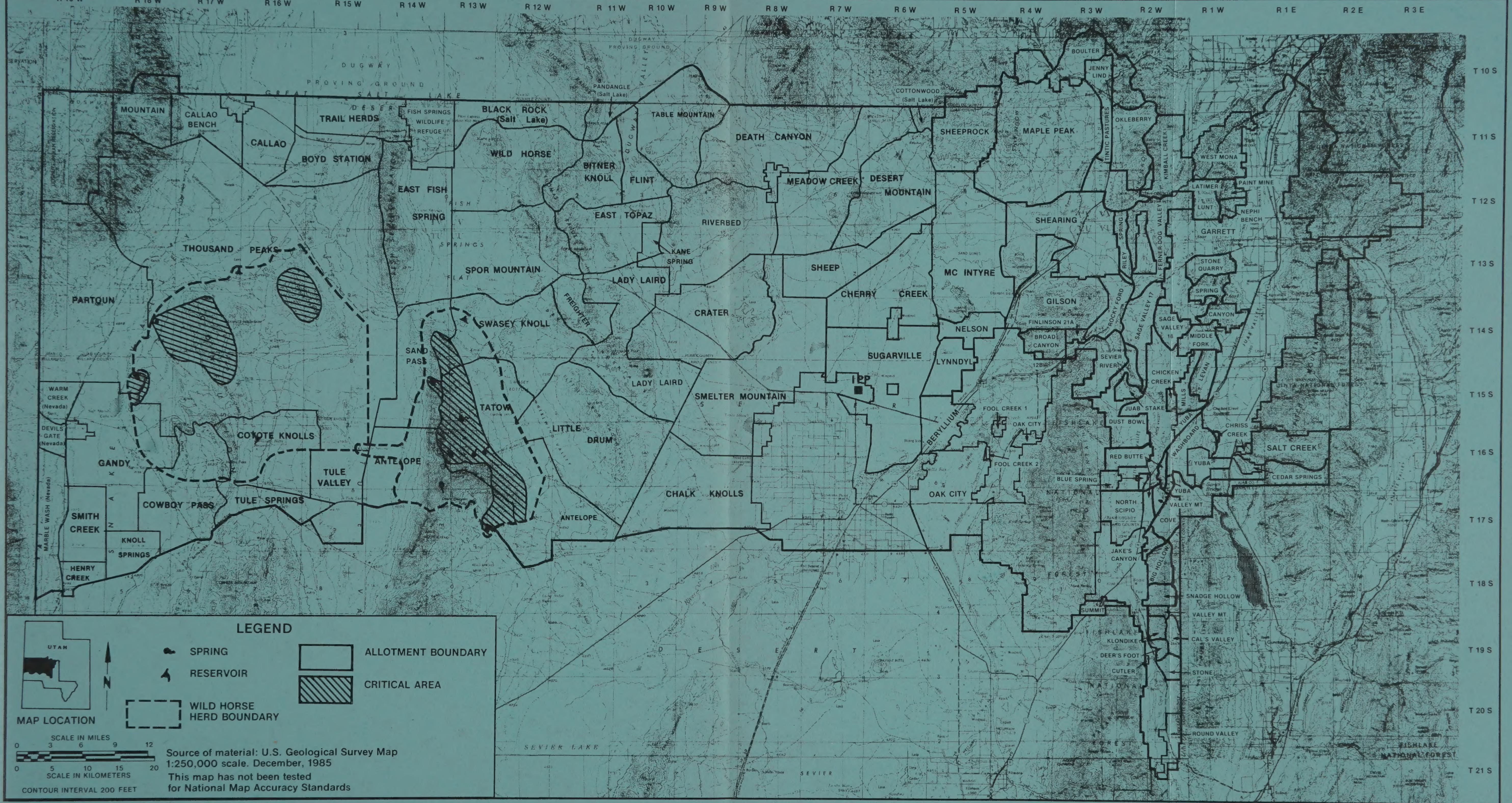
#### Genetics

Introduce new studs and mares from other wild horse herds to provide for more diversified, genetically sound herds.

### SUPPORT REQUIREMENTS

Range, wildlife, and other resource programs administering projects within HMAs must be managed to provide the protection for wild horses set forth in PL 92-195.

Coordination with the range and wildlife programs must occur for management of the herd and its habitat. This will require close coordination during the development phase of the HMA plan.



Source of material: U.S. Geological Survey Map 1:250,000 scale. December, 1985
This map has not been tested for National Map Accuracy Standards

FIGURE 2- 13
WILD HORSES

# RECREATION

## Introduction

### RECREATION MANAGEMENT AREAS

The HRRA contains a wide variety of recreation resources. Two areas are presently designated as Special Recreation Management Areas (SRMA).

The Little Sahara Recreation Area (which has been designated as a Class II Recreation Lands area under Outdoor Recreation Resources Review Commission classification) contains 62,000 acres of free-moving dunes, juniper-covered hills, and sagebrush flats and comprises some of the most heavily used public land in the State of Utah. The terrain and sand dunes features are ideally suited for ORV use, including four-wheel, motorcycle, dune buggy, and all-terrain vehicles (ATV) activities. BLM is currently managing the area under the Little Sahara Recreation Management Plan. Two-thirds of the area is managed for ORVs, while reserving the remaining land for nature study, picnicking, camping, and sand play. The Little Sahara Recreation Area is the only area within the HRRA that is managed on a year-round basis at the present time.

The area contains three highly developed campgrounds, an ORV events areas, and administrative complex, including a visitor center and bunkhouse and 15 miles of paved roads. There are certain times of the year when the current staffing (one maintenance man and one park technician) is not adequate to properly supervise and assist the visiting publics. Access to White Sands Campground is inadequate and needs to be improved.

The second SRMA is the Deep Creek Mountain Range. This is the only mountain range in the HRRA with an abundance of water. Six perennial streams on the eastern slopes of the range support fish populations of rainbow and cutthroat trout. Mule deer, mountain lion, antelope, bighorn sheep, grouse, and chukar are among the major wildlife species found on the mountain range. Big game hunting (antelope and deer), upland game hunting (grouse and chukars), fishing, backpacking, hiking, mountaineering, and camping are the most popular recreation activities. The Deep Creek Mountains are one of the most spectacular Great Basin mountain ranges in Utah. This SRMA is managed under split management jurisdiction with the BLM Salt Lake District and requires special coordination. The mountains rise 8,000 feet from the desert floor to form an island ecosystem in the Great Salt Lake Desert. Over 600 plant species grow on the mountain. Vegetation types range from salt desert shrub through pinyon-junipers and conifer forests to alpine tundra. The higher elevations, around 12,000-foot Ibapah and Haystack Peaks, exhibit sheer granite cliffs; glacial cirques; and stands of spruce, fir,

Deep Creek Mountains

pine (including bristlecone pine), and aspen. Spectacular narrow canyons on the east side of the range serve as entry corridors for recreationists into the high country.

The segments of Birch and Trout creeks with potential for study and addition to the National Wild and Scenic Rivers System within the Deep Creek Mountains would continue to be managed under the provisions of the August 2, 1979 Presidential Memorandum regarding Wild and Scenic Rivers and National Trails. An August 10, 1980 Council of Environmental Quality Memorandum outlines specific actions for interagency consultation to avoid or mitigate adverse effects on rivers in the Nationwide Rivers Inventory. These procedures are required as part of the environmental analysis process regarding any proposed action that could impact an inventory river.

Additional areas with significant recreation resources include Yuba Reservoir, Topaz Mountain, Antelope Springs Cave, Gandy Mountain Caves, and Swasey Mountain. Yuba Reservoir is a haven for fish, waterfowl, and water-based recreation activities. Much of the beach area is steep and rocky, but there are also some of the finest sand beaches in the State of Utah. Over 100,000 people visit the reservoir annually. BLM has no developments on the reservoir but has developed a Recreation Management Plan for the reservoir (Jacobsen, 1978). No funds have been allocated for implementation of the plan. Utah State Parks has developed recreation facilities at two locations on the reservoir, but they only accommodate one-fourth of the needs of the recreating publics. Vandalism, harassment of livestock, careless fire use, and indiscriminate ORV use are the major concerns.

Topaz Mountain contains some of the finest examples of Topaz crystals in the United States. The area, popular for rockhounding for many years, has been withdrawn from mineral entry, but some mining claims predated the closure. Antelope Springs Cave has a wide variety of challenging opportunities for spelunkers. The cave is used by the National Speleological Society for training new members. Many scout groups and other recreators use the cave. Some vandalism and littering has occurred. Gandy Mountain contains two limestone solution caverns: Crystal Ball Cave and Gandy Mountain Cave. Both caverns are in relatively pristine condition. Crystal Ball Cave, named for its extensive crystalline deposits, is one of the few caverns anywhere in the world with this type of deposition. Gandy Cave, though much smaller, contains well-formed dripstone formations. There are mining claims on both caves.

Swasey Mountain, comprising the northern third of the House Range Mountain Range, is a popular recreation area for rockhounding, big game hunting, and horseback riding. A wild horse herd roams throughout the range. The mountain contains high distinct peaks, steep palisade cliffs, narrow twisting canyons, and a variety of vegetation types including ponderosa pine, aspen, and fir trees. A considerable amount of wood cutting takes place on the southern end of the range, detracting from the natural, scenic appeal of the area.

Several recreation resources are under consideration for special management designations. They include Antelope Springs Cave, Antelope Springs Trilobite Beds, Baker Hot Springs, Dugway Geode Beds, Fumarole Butte, Gandy Mountain Caves, Rockwell Natural Area, Paul Bunyons Woodpile, Topaz Mountain Rockhounding Area, and the Deep Creek Mountains. A description of each recreation resource, in terms of its potential for special management designation, is found in the Lands section.

### OFF-ROAD VEHICLES

Existing ORV designations are shown on Figure 2-14.

The most intensive ORV use in the HRRA occurs at the Little Sahara Recreation Area with over 100,000 visitors per year. The primary focus of the majority of users is some form of motorized recreation (Colorado State University, 1981). Most user conflicts associated with this high intensity use have been eliminated and/or minimized through implementation of the Little Sahara Recreation Management Plan. The Rockwell Natural Area (9,604 acres) within Little Sahara is closed to ORVs to protect natural values. ORV use is limited on an additional 2,782 acres, in and adjacent to the campgrounds, administrative complex, and other heavy use areas. The remainder of the Little Sahara Recreation Area is open to ORV use. With the high use volume, there are still some ORV problems (i.e., accidents, use conflicts, resource damage) within the recreation area.

The Deep Creek Mountains are the only other location within the HRRA where ORV designation has been implemented. As a result of public concern for resource values within the Deep Creek Mountain Range, interim ORV designations have been implemented for the portion of

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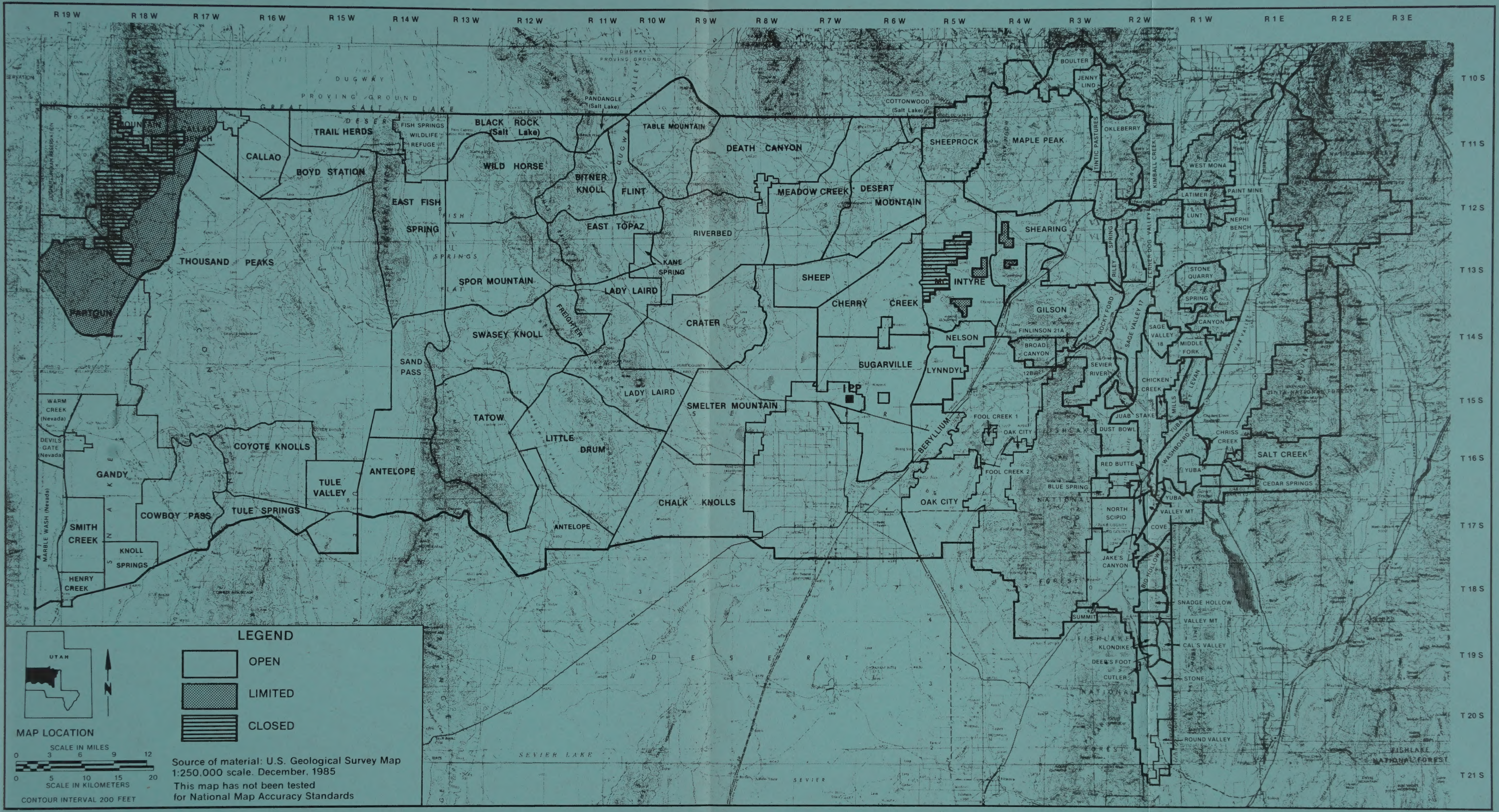


Source of material: U.S. Geological Survey Map 1:250,000 scale. December, 1985

This map has not been tested for National Map Accuracy Standards

FIGURE 2-14
ORV DESIGNATIONS
(EXISTING SITUATION)

the range in Juab County. Within the 95,669 acres under interim designation, no areas are open to unrestricted ORV use.

All public lands within that portion of the Deep Creek Wilderness Study Area (WSA) in Juab County are closed to ORV use except for the ways in Granite and Trout Creek Canyons. The area encompassed by the closure constitutes approximately 30,700 acres.

ORV use is limited to existing roads, ways, and trails on the remainder of area which includes the benchland along the eastern slopes, the foothills south of the range, and the higher elevations in Toms Creek and Middle Canyons. The area encompassed by the "limited" designation covers approximately 64,969 acres.

Yuba Dam is receiving over 100,000 visitors each year. Though most activity is associated with water-based recreation pursuits (i.e., boating, water skiing, fishing, and waterfowl hunting), many recreators bring their motorcycles, four-wheel drives, and ATVs. ORV disturbance, primarily in the form of new roads and trails, is most apparent on the ridge to the west of the dam, the foothills above East Beach, and along the south shoreline. Yuba State Park has opened up a gravel pit on State land near their park for ORV use, but this has not alleviated the ORV problem entirely around the dam. Presently, no ORV designations are in the vicinity of Yuba Dam on public land.

The Sheep Rock Mountains, Tintic Mountains, Desert Mountain, adjoining foothills, and desert flats, in conjunction with the open areas within the Little Sahara Recreation Area, provide a base for the largest and longest motorcycle races in the State of Utah. Four to six major races are held annually. Motorcycle clubs throughout Utah have indicated this area provides the best variety of terrain in the State for racing events and leisure riding. An estimated 27,000 visitors, accounting for 67,500 visitor days annually, use the area outside Little Sahara for ORV activities. There are some conflicts with grazing and wildlife. Though existing roads, trails, and washes are primarily used, there are some new trail segments which are periodically needed.

There is some ORV use associated with rockhounding at Topaz Mountains, Dugway Geode beds, and the trilobite beds. Most ORV activity is on existing roads, but there is some cross-country use.

Throughout the remainder of the HRRA, ORV activity is primarily limited to use of ORVs on existing roads and trails in connection with sightseeing, hunting, mining, livestock management, etc.

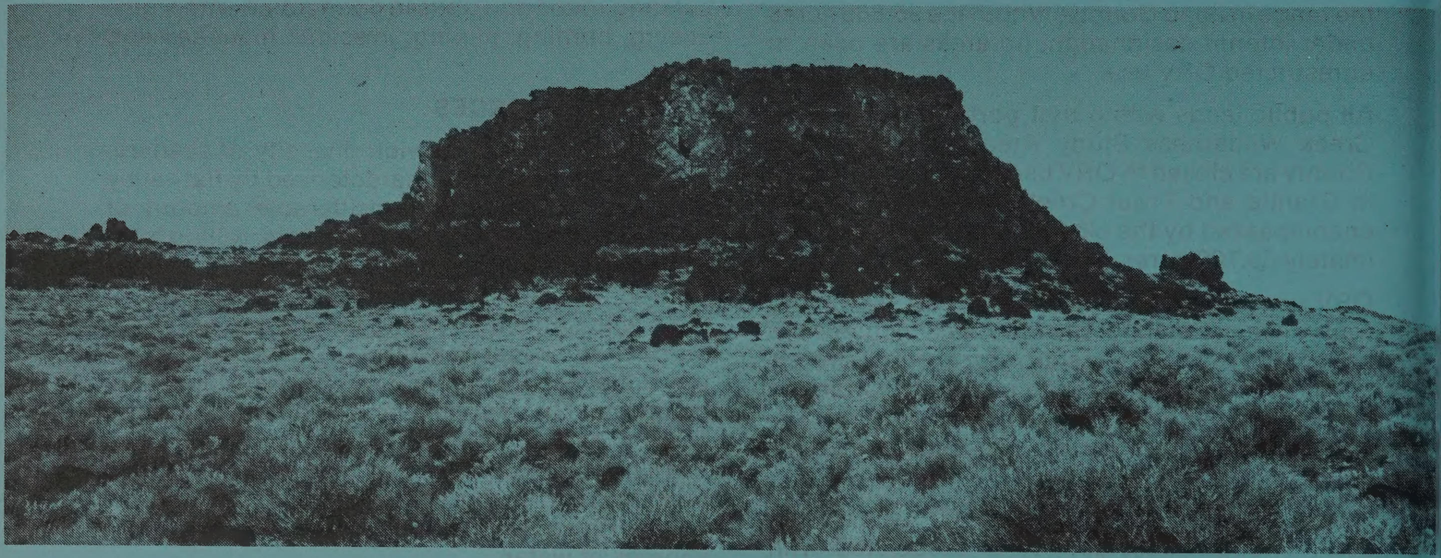
### VISUAL RESOURCES

The HRRA contains a wide diversity of scenery. The eastern portion is characterized by flat valley bottoms containing a considerable amount of farmlands and major travel corridors, rolling hills, and low mountain ranges. Toward the central portion, the landform changes to higher mountains with some interesting ledges and outcrops of rocks and wider flat valleys. The sand dunes of the Little Sahara Recreation Area are a unique landform. On the hills and mountains of the eastern and central portions, vegetation is primarily pinyon-juniper, with sage and grasslands predominant in the flat lands. Yuba Reservoir, Sevier River, and Cherry Creek are the major sources of water.

In the western portion of the resource area, the barren valley floors are broken by several high mountain ranges, rising up to 8,000 feet above the valley floor. This provides a striking contrast in landforms and vegetation. Sheer cliff escarpments and peaks, rising above timberline, expose a variety of colors and rock types. Pinyon pine, juniper, ponderosa pine, aspen, mountain mahogany, and bristlecone pine are found on these mountain ranges. Vegetation on the valley floors is very sparse with shadscale and sage being the predominant types. The large Tule Valley hardpan is almost completely devoid of any vegetation. The six perennial streams within the Deep Creek Mountains and the waters within the Fish Springs Bird Refuge are major visual features.

In order to provide a BLM-wide systematic approach for identifying scenery quality and setting minimum quality standards for management of the visual resource values on the public lands, BLM established the Visual Resource Management System contained in BLM Manual 8400. In 1980, Meiiji Resource Consultants were contracted by BLM to conduct a visual resource inventory and analysis of West-Central Utah Regional Area using this system. The inventory included all of the Tintic and two-thirds of the Topaz planning units. The remaining third of the Topaz Planning Unit was completed by BLM personnel.

The Deep Creek, Fish Springs, and Swasey Mountain ranges; Fumarole Butte; and the Little Sahara sand dunes were the visual resources found to have the highest (Class A) visual qualities. Portions of these mountains ranges, in addition to the Gilson, Tintic, Valley, Sheeprock,



Fumarole Butte

Drum, Little Drum, Thomas, Keg, and Desert Mountain ranges, are those areas with moderate (Class B) visual qualities. The flat or gently rolling valleys and foothills which comprise much of the resource area contain low (Class C) visual qualities (Shiozawa and Larson, 1980).

Based on this scenic quality, visual sensitivity, and visual distance zones (see Glossary), all public lands were assigned visual resource management (VRM) classes. These classes specify the objectives for managing the visual resources, the degree of landscape modification allowed, and provide a basis for BLM land use planning decisions. All previous planning efforts were done prior to implementation of the VRM system and, therefore, did not include these proposed management classes. Figure 2-15 provides an overview of the location of various management classes and summarizes the number of acres in each VRM class by planning unit. The management objectives for each class are as follows:

- VRM Class II. Management activities/modifications of the environment should not be evidence in the characteristic landscape. Changes may be visible but should not attract attention.
- VRM Class III. Changes caused by management activities may be evident but should remain subordinate to the existing landscape.
- VRM Class IV. Changes may attract attention and be dominant landscape features but should reflect the basic elements of the existing landscape.

## CULTURAL RESOURCES

### Prehistory

Utah's western desert has been host to sporadic human activity for almost 14,000 years. The HRRA is known to have at least four distinctive prehistoric cultures represented. The earliest is the Clovis culture of the Paleo-Indian tradition and has been radiocarbon dated from approximately 12,000 to 9,000 B.C. These early people were specialized big-game hunters, primarily adapted to a late-Pleistocene environment.

Following the Clovis culture in the Western U.S. was the Folsom culture, also part of the Paleo-Indian tradition, dating from approximately 10,000 to 7,000 B.C. Both the Clovis and Folsom cultures were adaptations to a similar set of environmental conditions and are evidenced today by highly distinctive fluted projectile points.

This Paleo-Indian tradition, including both the Clovis and Folsom cultures and beginning at least by 12,000 B.C., was eclipsed by the onset of warmer, drier climatic conditions, and the subsequent extinction of megafauna at about 7,000 B.C.

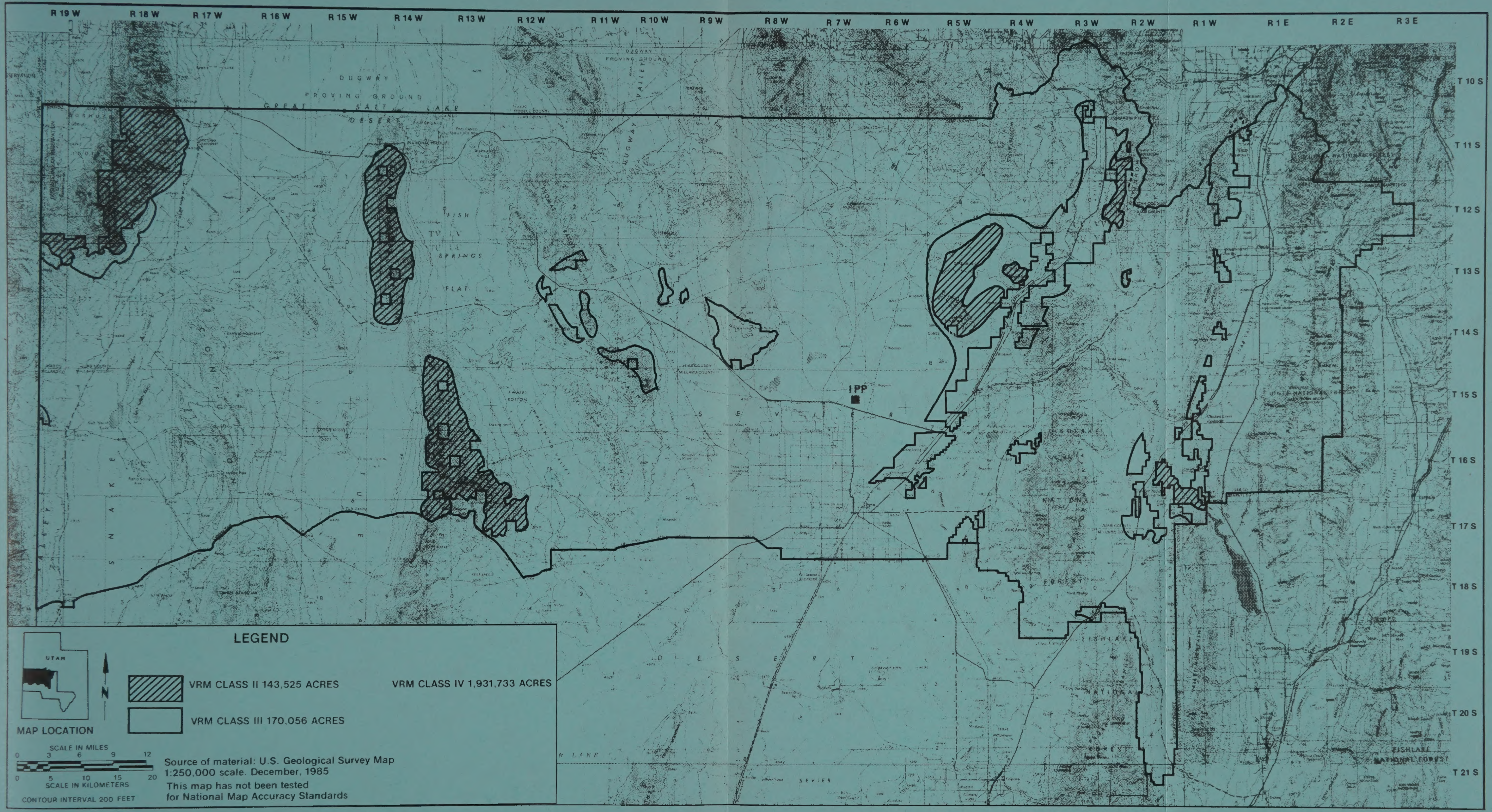


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FIGURE 2- 15

VISUAL RESOURCE MANAGEMENT CLASSES

Following the Paleo-Indian tradition in the Great Basin was the Desert Archaic culture, appearing about 7,500 B.C. and representing an attempt to deal with a new environment. These people were hunters and gatherers and lived very mobile and highly adaptive lifestyle. They exploited a wide variety of natural resources by engaging in a seasonal round; they moved to differing ecosystems to harvest various natural resources (i.e., seed-bearing plants, migrating animal herds, etc.) as they came into season. Archaic people left scant traces in the archaeological record. Most often, these traces in the HRRA are campsites and lithic debris, characterized by a variety of chipped stone artifacts. The Archaic lifeway showed little change for thousands of years, probably due to comparable environmental stability.

By A.D. 800, the semi-horticultural Fremont people were somewhat established in the area. Their genesis remains a mystery, but the fact that they were present in the area for some 500 years is undisputed. Sixty-four Fremont sites have been recorded in the HRRA.

Fremont people relied on the collection of wild resources and domesticates, although there is some question as to the degree of reliance on one over the other.

Fremont sites in the HRRA consist mainly of small structural habitation sites and nonstructural camps. These are often associated with sand dunes. Small villages are, no doubt, situated on alluvial outwash fans near canyon mouths and dependable water sources. They are generally made up of a few pithouses and associated granaries with occasional surface dwellings.

Aboriginal occupation of the area declined precipitously about A.D. 1200 or 1300. Drought, soil, and/or resource depletion, social or religious beliefs, or feuding and raiding among neighboring groups have all been offered as possible reasons for the mass depopulation. However, no one reason has yet been conclusively demonstrated as being the major cause of this widespread abandonment.

Whatever may have happened, it is evident that Paiute-Shoshone groups took over the territory after the Fremont "disappeared," and occupied it until European contact in the Nineteenth Century. They were apparently immigrants to the area and lived a basically Archaic hunting and gathering lifestyle. They manufactured a thick-walled grey/brown pottery and lived in hide teepees, wickiups, and rock shelters.

### History

The first historical account within the HRRA is of the Dominquez-Escalante expedition. The expedition entered the resource area on September 27, 1776, through a gentle pass where present-day I-15 crosses the Juab-Utah county line. Seven days were spent traveling through the resource area in a generally southwest direction that took them past Burriston Ponds near Mona, down Juab Valley to Chriss Creek, past Scipio through Scipio Pass and on to Pavant Butte, crossing the present resource area boundary sometime during the day of October 1, 1776 (Warner, 1976). During the expedition, the two Catholic Fathers established relationships with numerous Indian groups which have influenced history down to the present day.

The Goshute Indians inhabited a region south and west of the Great Salt Lake in one of the most arid and inhospitable regions of the country. Most were concentrated in the Deep Creek Mountains region and in Rush, Skull, and Tule valleys.

Shortly after the arrival of the Mormons in the Great Basin in 1847, the Goshutes began to feel the disruptive influences of Anglo civilization. The Indians were accustomed to locating their camps near streams and canyons in order to take advantage of the water and readily available food. It was not long before the Anglos were establishing permanent settlements and building sawmills and gristmills at these same locations.

By 1860, Anglo settlements had invaded many of the favored Goshute regions. The Pony Express traversed Goshute territory, and several Overland Mail Stations were built on Goshute land. Anglo population soon exceeded that of the Indians. As the Indians watched land being appropriated for agriculture and saw their traditional grounds being used as livestock range, they began to raid White settlements.

The Bureau of Indian Affairs (BIA) became interested in molding the Goshutes into a sedentary farming society (the non-raiding type). Only a few were ready for the new lifestyle, and numbers of the Goshutes were soon attracted to the Overland Mail Stations. Because the traditional Goshute way of life was being slowly eroded, the Indians were forced to starve or steal.

After an abortive attempt to move the Goshutes onto a reservation in the Uinta Basin, their ancestral homelands west of the Deep Creek Mountains were set aside as an Indian reserve. With the establishment of the Goshute Reservation, the traditional cycle of Indian-White contact in American was again complete.

Mining activity began in the 1850s with the coming of White settlers; the majority of it dwindling by the early 1900s. Practically every mineral of commercial value was mined in the eastern Great Basin, with lead, silver, and gold making up the bulk. They were usually found in sufficient quantities that made their extraction commercially feasible. The distance of the mines from a railroad connection prevented extensive operation, and ore was hauled long distances through the desert by freight wagons and six or eight horse teams. For those mines that maintained steady operations and regular shipments (such as the Utah and Galena Mines at Fish Springs), transportation of ore was taken care of by established freight operations. But many old area residents also benefitted from hauling ore. The freight they hauled brought in a little extra money during the fall and winter months.

Mining camps sprang into existence in several locations and had names such as Ibapah, Granite, Fish Springs, Deep Creek, Granite Creek, Joy, and others.

The discovery of gold in California, coupled with the westward migration of thousands of easterners and the creation of frontier settlements, demonstrated the need for more efficient and faster communications with the East. The Pony Express was established in April of 1860 to serve this need, and communications between St. Joseph, Missouri, and Sacamento, California went to 9 days from the 3 months it had taken previously.

The Pony Express and the Overland Mail Service were fast and efficient, but they brought about costs greater than income. Financial problems plagued the service from its inception, and this burden, together with the completion of the telegraph in October of 1861, brought an end to the Pony Express. Physical remains of five old Pony Express stations are visible in the resource area today, along with approximately 50 miles of the trail (much of which is under the present Pony Express road).

The establishment of the Civilian Conservation Corps (CCC) in 1933 gave a major boost to the cause of reclamation in Utah. Projects that had long been planned by the Departments of Agriculture and Interior were finally able to proceed.

Where possible, flood control activities were combined with water storage projects, especially in the desert areas of the western part of the State. Huge herds of sheep and cattle grazed in western Utah during the winter months, and facilities for livestock were often in short supply. Because of the lack of suitable water resources throughout the desert range, nearly all CCC's Division of Grazing camps spent most of their time and labor constructing reservoirs, developing springs, and placing water troughs. These CCC projects served their purpose, and many are evident today. The remains of three CCC camps are present: the Antelope Springs camp near Swasey Peak, the Callao Camp south of Callao on Tom's Creek, and the Kane Springs Camp west of Keg Mountain. The camps all consist of a few concrete building foundations in various stages of decay.

**Existing Inventory Information**

To date, 319 sites have been recorded in the HRRA. They fall into the following categories: Paleo-Indian, 3; Archaic, 44; Fremont, 64; Ute/Paiute, 7; Shoshone, 4; Historic, 13; unknown, 184.

Five sites/districts within the resource area boundaries are listed on the National Register of Historic Places.

1. Nephi Mounds
2. Fish Springs Caves Archaeological District
3. Tintic Mining District
4. Tintic Standard Reduction Mill
5. Topaz War Relocation Center Site

(Only a portion of the Fish Springs District is on BLM-administered land.)

The major historic sites and National Register listings are shown on Figure 2-16. Non-National Register prehistoric sites are not depicted because of their dense geographic distribution.

### PALEONTOLOGY

Most fossil-bearing strata in the resource area fall into two geologic eras: Paleozoic (approximately 225 to 600 million years ago) and Cenozoic (approximately 10,000 years to 70 million years ago). The older Paleozoic deposits are found in the mountain ranges, while the comparatively younger Cenozoic deposits include the recent Quaternary alluviums, making up the valleys and foothills.

Paleozoic rocks in Utah were deposited mostly under shallow marine conditions and consist mainly of limestone, dolomite, and sandstone. The fossil material contained in these deposits is an important tool for deciphering the geologic history of the mountain ranges of western Utah.

The exposed Cambrian deposits found in the House Range provide one of the most outstanding fields in the country for gathering fossils of this geologic period. Forty different species of trilobites have been found in the Antelope Springs area; one of which is the earliest form of differentiated life recorded.

There are no data on the individual exposed Paleozoic formations in the resource area. These formations span the Ordovician, Silurian, and Devonian periods and are most likely fossiliferous. The invertebrate fossils they contain consist of several types of trilobites and sponges, cephalopods, gastropods, and brachiopods.

The majority of the geologic deposits in the resource area are Cenozoic and consist of valley-filling alluvial, lacustrine, and volcanic materials. The Miocene and Pliocene fill in the eastern Great Basin valleys is more than 8,000 feet thick in places and includes the salt masses under the Sevier Desert. Overlying this are the more recent Quaternary surficial deposits (0-2 million years ago) which include glacial deposits and Pleistocene Lake Bonneville sediment.

Quite a variety of fossil remains occur in these sediments, including some of the larger mammals, like bison, sheep, and horses. Some significant vertebrate fossils have been found in the Quaternary sediments and the potential exists for more. Cenozoic fossil locations are distributed mostly along the margins of the valleys and in the mountain ranges made up of Tertiary volcanic material. Fossil rabbits, fish, lizards, and birds are fairly abundant. Less abundant (and also less significant) are the fossil clams and snails found in the valley fill.

Paleontological resources are protected against unauthorized removal by the Antiquities Act of 1906 and the Utah State Antiquities Act. Both pieces of legislation treat fossil material as objects of antiquity.

(Note: The accompanying geologic time scale (Table 2-25) explains the terminology referring to time periods.)

## Elements of the Plan

### GOALS AND OBJECTIVES

Provide recreation opportunities under BLM's basic stewardship responsibilities for unstructured, extensive types of recreation uses, maximizing the visitor's freedom of choice. Continue to maintain important recreational values in Federal ownership to insure this continued diversity of recreation opportunities.

Plan, modify, and implement resource management activities in a manner which will minimize impacts to visual resources. Apply special emphasis in environmental assessment and project design to projects in the scene area (foreground visual zone) in order to meet VRM objectives.

Protect the cultural and historic values in the planning area from accidental or intentional destruction and give special protection to high value cultural and historic sites.

## Proposed Action

### GENERAL

Special recreation use permits will continue to be processed. Recreation resources will be evaluated on an individual basis as part of project level planning. Such evaluation will consider the significance of the proposed project and the sensitivity of recreation resources in the affected area. Stipulations will be attached as appropriate, to assure compatibility of projects with recreation management objectives. All identified significant historic, archaeologic, and cultural sites will be protected.

### VISUAL RESOURCE MANAGEMENT (VRM)

Visual resources have been evaluated as part of activity and project planning. Such evaluation will consider the visual sensitivity of the affected area. Stipulations will be attached as appropriate to protect visual resources and, if feasible, meet visual resource management objectives in affected areas. Visual resources in the HRRA are managed in accordance with the BLM VRM Class Management Standards.

## TABLE 2-25

## Geologic Time Scale

| Era | Periods | Epochs | Million Years to State of Period |
|---|---|---|---|
| Cenozoic | Quaternary | Recent | |
| | | Pleistocene | 1 |
| | Tertiary | Pliocene | 11 |
| | | Miocene | 25 |
| | | Oligocene | 40 |
| | | Eocene | 60 |
| | | Paleocene | 70 ± 2 |
| Mesozoic | Cretaceous | | 135 ± 5 |
| | Jurassic | | 180 ± 5 |
| | Triassic | | 225 ±5 |
| Paleozoic | Permian | | 270 ± 5 |
| | Pennsylvanian (Carboniferous) | | 290 ± 10 |
| | Mississippian (Carboniferous) | | 360 ± 10 |
| | Devonian | | 400 ± 10 |
| | Silurian | | 440 ± 10 |
| | Ordovician | | 500 ± 15 |
| | Cambrian | | 600 ± 20 |
| Precambrian | | | ? |

Source: Tidwell, 1975.

### LITTLE SAHARA

Currently managed under the Little Sahara Recreation Area Management Plan (1973) (62,829 acres of which 55,905 are public lands).

### YUBA DAM

No facilities at present. Implement the 1978 Recreation Management Plan.

### TOPAZ MOUNTAIN

No facilities at present. Validity determination on mining claims in progress. Area is currently withdrawn from mineral entry and is under a no shooting restriction. Collection of crystals limited to hand tools only.

Develop Recreation Management Plan to include: acquisition of State land, improvement of access, construction of camping facilities (including restrooms), resolution of mining claim validity, and continuation of mineral withdrawal, and no shooting restrictions.

### DEEP CREEK MOUNTAINS

Currently one campground. Develop Recreation Management Plan to include improving access in Granite Canyon, Indian Farm Canyon, and Tom's Creek Canyon. Establish support facilities (visitor information center, trailheads, and campground).

### SPECIAL RECREATION MANAGEMENT AREAS

Current areas are Little Sahara and Deep Creek Mountains. The proposed areas are Yuba Dam, Topaz Mountains, Sheeprock/Tintic ORV area, Gandy Mountain Caves, Swasey Mountains, and Antelope Springs Cave.

### SPECIAL MANAGEMENT DESIGNATIONS

Recreation resources which may receive special management designations are listed in the Lands section. If designated, management plans would be prepared and the actions outlined implemented.

### ORV RESTRICTIONS

#### Little Sahara Recreation Area and Vicinity

- ORV use in the Little Sahara Recreation Area would continue to be limited (i.e., restricting ORV use to roads and limiting speeds within campgrounds) on 2,782 acres and closed on 9,604 acres (Rockwell Natural Area). (See Figure 2-17 for proposed designations.)
- The remaining portions of Little Sahara and adjoining lands would be established as a competitive events area, subject to present management.

  Limitations on ORV use would be in these areas during periods of livestock and wildlife use to protect rangeland, wildlife, and other values (i.e., adjust dates of events, locations, amount of use, etc.). Allotments affected would include Cherry Creek, Death Canyon, Desert Mountain, Maple Peak, Meadow Creek, Riverbed, Sheep, Sheeprock, Sugarville, and the portions of McIntyre and Shearing allotments outside Little Sahara (415,830 acres).
- The locations and condition of roads and trails would be inventoried and monitored.
- Three- and four-wheel ATV use would be discouraged other than on sand dune terrain, existing roads, and special designated trails.

In the Deep Creek Mountains, the 30,700-acres closure and 64,969-acres limitation to existing roads and trails would continue.

ORV use on Swasey Mountain (34,500 acres) and west of Yuba Dam (1,650 acres) would be limited to existing roads, ways, and trails.

DMAD/Oak City sand dunes would be established as an ORV use area with special emphasis on ATVs.

Within the HRRA, 40,304 acres would be closed, 519,731 acres limited, and 1,684,965 acres open to ORV use.

### SUPPORT AND PROGRAM COORDINATION

Lands and mineral support would be required in processing special designation and providing mineral examinations. Lands coordination would also be required in processing quantity grants and exchanges to assure access is maintained to areas having recreational values.

Program coordination will be required with the wildlife and watershed programs in assessing the effects of the ORV limitation on riparian areas and important habitats.

Support is required from the landscape architect in design of BLM initiated projects and a mitigation assessment on non-BLM projects. Since visual resource's management affects virtually every BLM program, coordination is required from all programs in which surface-disturbing activities are required to achieve program objectives. Special emphasis on program coordination is required from the range, wildlife, and watershed programs in which significant acreage may be proposed for land treatment. The lands and minerals program should also coordinate with the design staff on non-BLM initiated projects (oil, gas, and geothermal development; location of gravel sales; rights-of-way; etc.) for appropriate mitigation measures.

Cultural clearances are required as a component of all project approval procedures. Program coordination is, therefore, required by all activities in which projects are required to achieve other programs' management objectives.

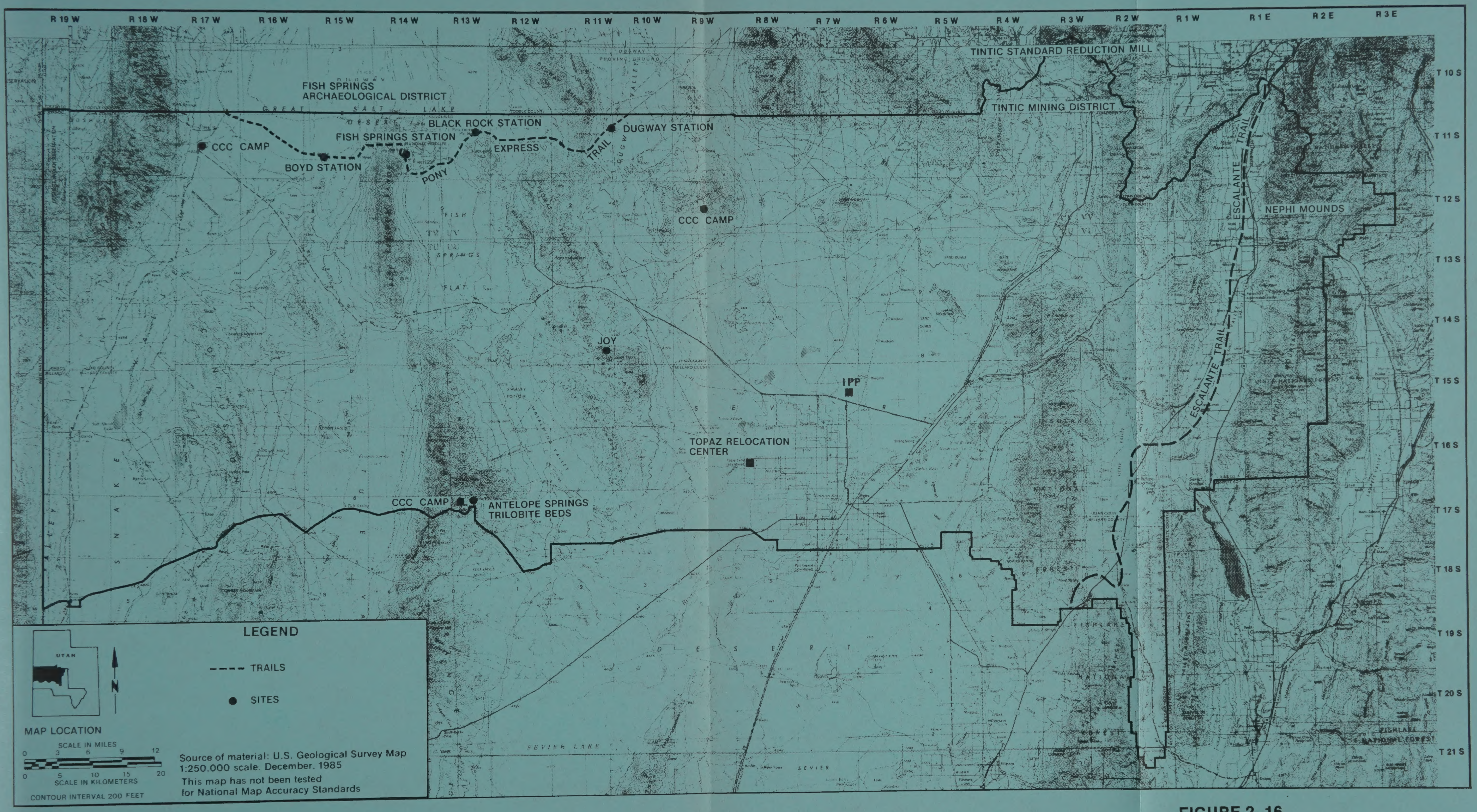

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FIGURE 2- 16

MAJOR HISTORIC SITES AND NATIONAL REGISTER LISTINGS

# LANDS

## Introduction

There are 3,407,505 acres of land in the HRRA. Of this, 2,245,314 acres or 66 percent are public lands managed by the BLM. Land ownership in the HRRA is found on Table 2-26. Most of these lands are in a large contiguous block in the western portion of the resource area, interrupted only by the four regularly occurring State sections per township and some small private inholdings. Public lands in the eastern portion of the resource area are more intermixed with private and State lands.

**TABLE 2-26**
**Land Ownership in HRRA**

| | Acres | Percent of Total |
|---|---|---|
| Public/BLM Administered | 2,245,314 | 65.9 |
| Private | 591,346 | 17.3 |
| State of Utah: | 300,529 | 8.8 |
| Utah Division of Wildlife Resources | 10,106 | 0.3 |
| Other Federal: | | |
| Forest Service | 209,997 | 6.2 |
| Fish and Wildlife Service<br>Fish Springs Refuge | 17,992 | 0.5 |
| Bureau of Indian Affairs<br>Goshute Reservoir | 32,221 | 0.9 |
| Total | 3,407,505 | |

The majority of the population of the resource area lives in the Delta and Nephi areas. These two population areas are surrounded by large areas of private land. The communities in these areas rely very little on public lands for expansion or public services. One exception is that each of these areas is serviced by a sanitary landfill under a Recreation and Public Purposes Act (R&PP) lease on public lands.

Nearly all work done in the Lands program is in response to applications of various kinds received from outside BLM. Administration policy sets the priority for ranking applications when there is competition for manpower to process them.

### LAND DISPOSALS

No lands are currently identified for disposal.

### RIGHTS-OF-WAY CORRIDORS

No rights-of-way corridors exist in the resource area presently. Many rights-of-way are granted each year in the resource area. They are for a wide variety of uses and vary greatly in size. The most common are for powerlines, telephone lines, pipelines, and roads. Applications for major long distance rights-of-way are directed to locate adjacent to other major rights-of-way in the planning area where feasible. Existing major rights-of-way are shown on Figure 2-18.

Most applications for rights-of-way and/or permits are for relatively small uses that involve short distances of less than 1 mile and small acreages of less than 5 acres. Such applications are processed as they are received and are almost always consistent with existing plans and policies. Such small land uses are usually needed in conjunction with existing developments (e.g., a short powerline or pipeline over a corner of public land to serve a farm or other existing development).

### SPECIAL DESIGNATIONS

At present, there is only one special designation in the planning area. This is the Little Sahara Recreation Area, which is designated as a Class II Recreation Area. A portion of Little Sahara was proposed (and significant work done toward the designation) as the Rockwell Natural Area, a Class IV Recreation Area. This designation was never completed. Several other tracts of land with special values are protected by Classification and Multiple Use Act (C&MU) classifications (Figure 2-19). These will continue.

## Elements of the Plan

### GOALS AND OBJECTIVES

The objectives of the lands program are to provide effective public land management and to improve land use, productivity, and utility through: (1) accommodation of community expansion and economic development needs; (2) improved land ownership patterns; and (3) providing for the authorization of legitimate uses of public lands by processing use authorization, such as rights-of-way, leases, permits, and State land selections in response to demonstrated public needs.

## Proposed Action

### DISPOSALS

No lands would be identified for disposal. All public lands would be retained in Federal ownership in accordance with FLPMA, Section 2, unless information not currently available indicates that disposal for certain uses may better serve the national interest. In such cases, an amendment to the plan would be prepared.

### ACQUISITION

In addition to the Parish exchange, other non-public lands within specific management areas and WSAs would be considered for acquisition.

### RIGHTS-OF-WAY

Corridors would be designated along existing major rights-of-way. Major new rights-of-way would be directed to locate within these corridors when feasible (see Table 2-27). Public lands identified for special designation are considered major right-of-way avoidance areas.

### WITHDRAWALS

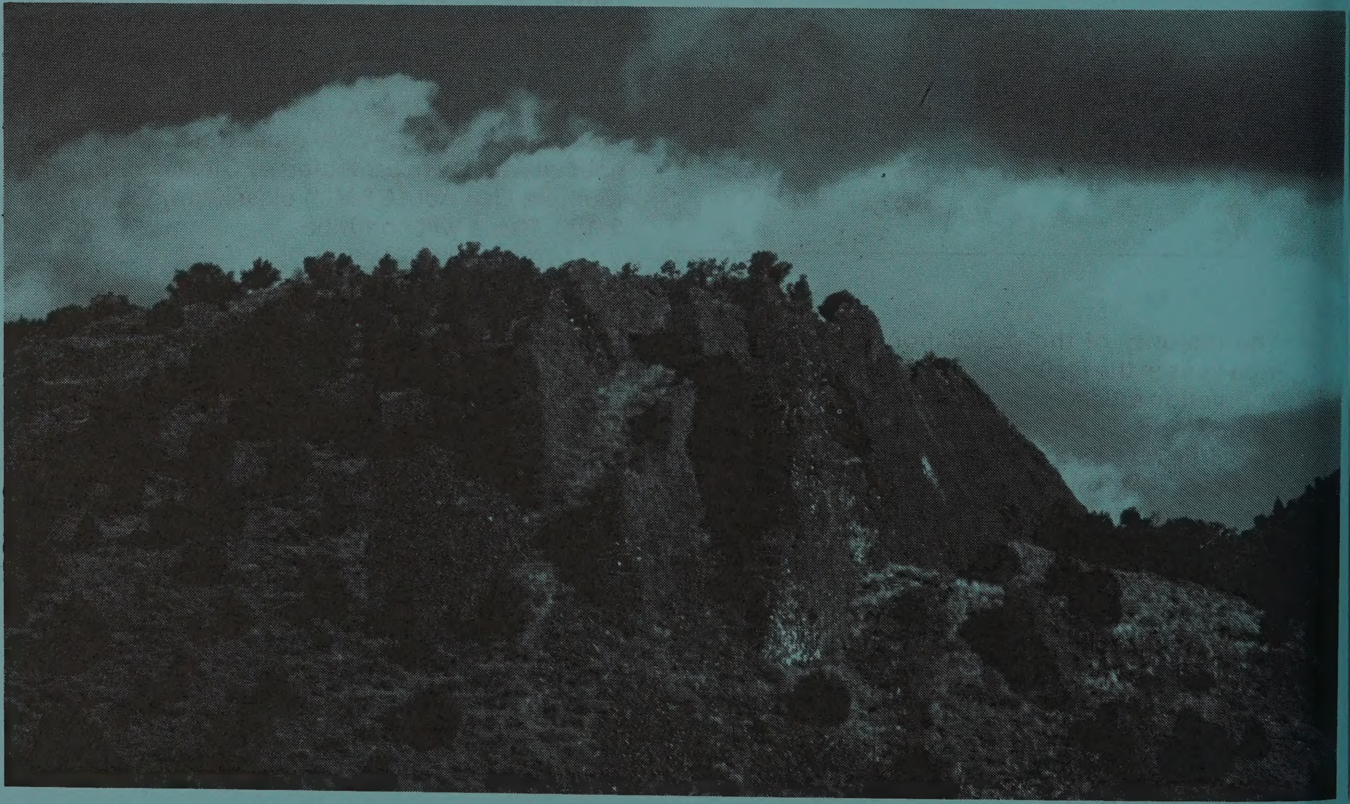
Withdrawals are initiated to protect special resources or improvements on public lands. Existing HRRA withdrawals are: Little Sahara Recreation Area (campground), Goshute Indian Reservation, Fish Springs National Wildlife Refuge, Uinta National Forest, Fishlake National Forest, and Wasatch National Forest.

Initiate withdrawals from mineral entry for the Rockwell Natural Area, Topaz Mountain, Dugway Geode Beds, and Gandy Mountain Caves.

### SPECIAL MANAGEMENT DESIGNATIONS

Special management designations would be initiated for the sites listed below. Protection for those sites would be initiated as listed below. Those sites which are currently protected by C&MU classifications terminated.

- Deep Creek Mountains: Designate area as an ONA to protect identified resource values (30,740 acres). Initiate leasing Category 3.
- Bonneville Cutthroat Trout: Sensitive species under review for T&E listing. No special designation at present. It is protected under current management. Most of this area is within the Deep Creek Mountains and that part of the habitat would be protected from leasable mineral operations by Category 3.
- Least Chub: Sensitive species under review for T&E listing. No special designa-



Paul Bunyon's Woodpile

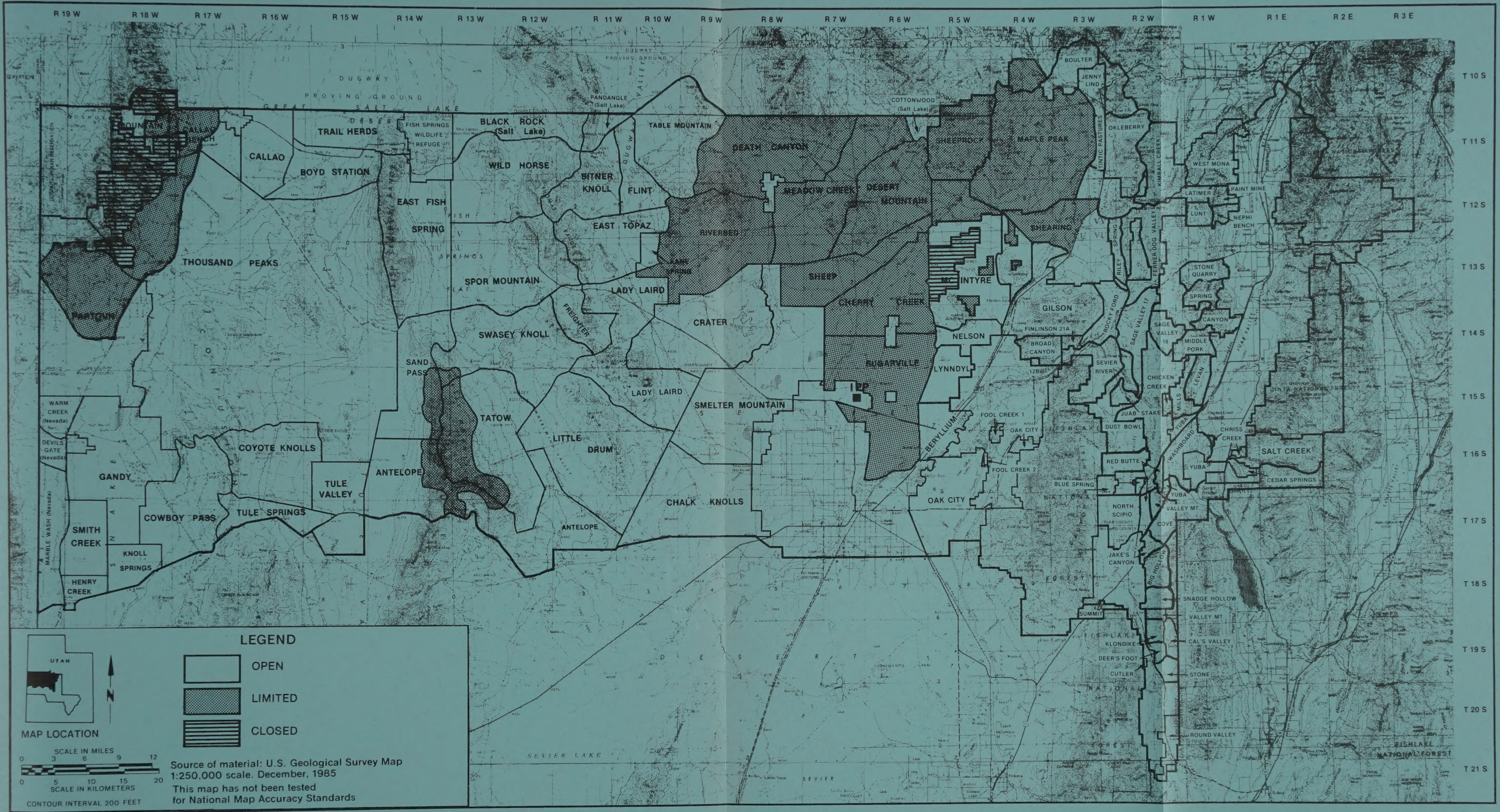


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FIGURE 2- 17
ORV DESIGNATIONS
UNDER THE PROPOSED PLAN

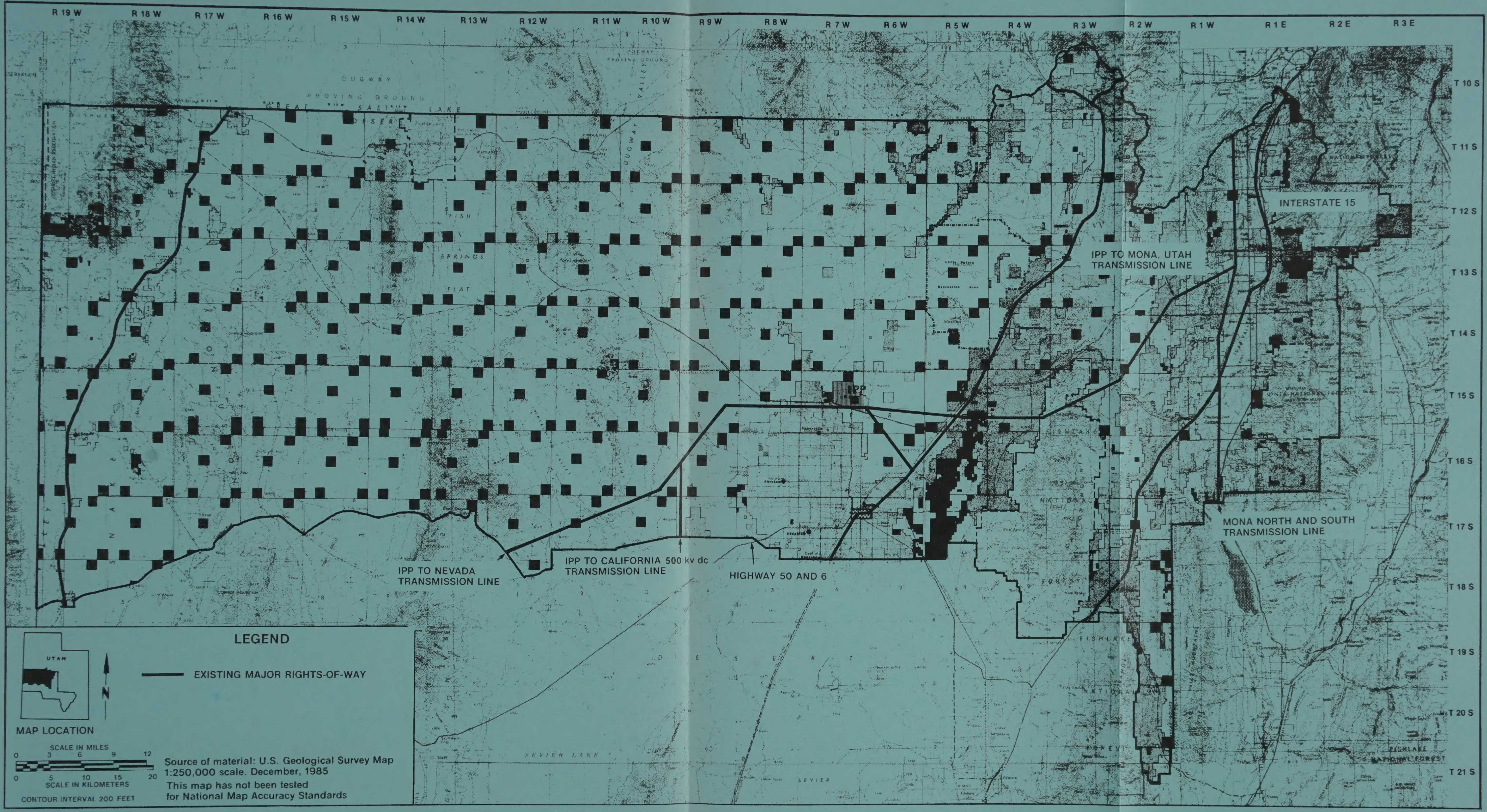

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FIGURE 2- 18
EXISTING MAJOR RIGHTS-OF-WAY

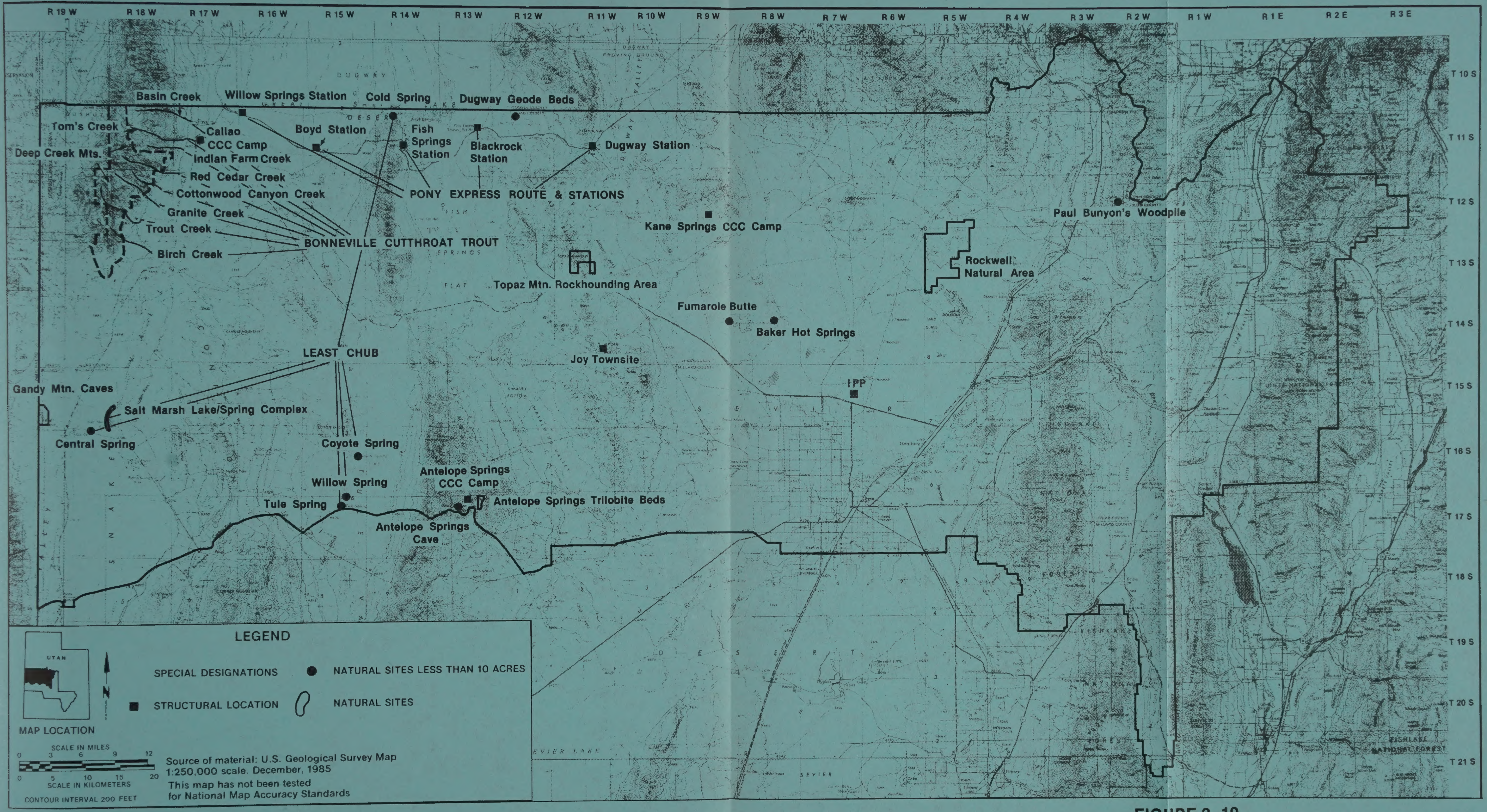

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FIGURE 2- 19

AREAS RECOMMENDED FOR SPECIAL DESIGNATION

TABLE 2-27

Right-of-way Corridor Specifications

| Name | Corridor Width (ft.) | Specifications | Terms[a] |
|---|---|---|---|
| IPP to Nevada Transmission Line | 1,500 | Available for all utility uses. | 4, 7 |
| IPP to California 500-kV d.c. Transmission Line | 1,500 | Available for all utility uses. | 4, 7 |
| U.S. Highway 50&6 | 2,000 | Available for all uses. | 1, 2, 3, 8 |
| IPP to Mona Utah Transmission Line | 1,500 | Available for all utility uses. | 4, 7 |
| Mona North and South Transmission Lines | 1,500 | Available for all utility uses. | 4, 7 |
| Interstate 15 | 3,000 | Available for all uses. | 6,8 |

[a] Terms:

1. The road or highway within the right-of-way corridor shall be used to the maximum extent possible for construction and maintenance of new rights-of-way.
2. Roads that are needed for construction of a new right-of-way shall be temporary and fully rehabilitated.
3. All land disturbed by new rights-of-way except authorized new access roads shall be rehabilitated to as close to natural conditions as possible.
4. Transmission line rights-of-way shall be adjacent to each other or as close as possible.
5. Buried telephone cable lines shall be close to existing roads and highways and generally within the road right-of-way.
6. New rights-of-way shall be limited to below the surface of the ground uses only.
7. Existing transmission line access roads shall be used, and only tee roads to new tower sites shall be constructed for new rights-of-way.
8. All rights-of-way must comply with the applicable Visual Resource Management Class guidelines.

tion at present, but is protected under current management. 3,360 acres presently in oil and gas Category 4.

- Antelope Springs Cave: Popular recreation area with cave explorers. No special designation at present. Initiate a Class III Recreation Area for 150 acres.
- Baker Hot Springs: Continue under present leasing Category 2 (160 acres) and revoke current C&MU classification.
- Tom's Creek: This area is part of the Deep Creek Mountains and Bonneville cutthroat trout habitat areas and would be managed by those criteria. Revoke current C&MU classification.
- Dugway Geode Bed: Initiate a withdrawal on 1,920 acres to protect rockhounding values. Revoke current C&MU classification and continue other present management.
- Fumarole Butte: Volcanic landform. Does not meet any special designation criteria. Continue leasing Category 3 (160 acres) to protect recreation values.
- Gandy Mountain Caves: Designate ACEC. Expand present leasing Category 3 to 1,120 acres. Institute a withdrawal from mineral entry on that area.
- Rockwell Natural Area: Designate ACEC. Initiate withdrawal from mineral entry (9,630 acres). Maintain 4,750 acres in leasing Category 4. Implement 4,880 acres in Category 3.
- Paul Bunyon's Woodpile: Designate Class III Recreation Area (320 acres). All acreage would be in leasing Category 3.
- Topaz Mountain Rockhounding Area: Designate area as a Class III Recreation Area. Initiate a mineral withdrawal. Revoke C&MU to protect rockhounding values.
- Pony Express Route and Stations (Fish Springs, Black Rock, Dugway, Boyd): Evaluate for National Register and revoke current C&MU classification.
- Civilian Conservation Corps (CCC) Camps: Determine National Register eligibility, install interpretative signing, expand fence at Tom's Creek picnic area to enclose camp.
- Joy Townsite: Record as a significant historic site. Map site to determine boundaries of patented mining claim.

## SUPPORT AND PROGRAM COORDINATION

The following support needs would be required to achieve management objectives outlined for the lands program: clerical, Cadastral Survey, land appraisals, mineral examinations, and site resource evaluations for affected resources.

Program coordination between the lands program and other programs will be administered as follows:

1. Land Disposal: The normal NEPA (Environmental Assessments) and land report process will provide for input and coordination with other programs.
2. Corridor Designation: Program coordination will be achieved through the normal NEPA and land report process.
3. Use Authorization: The normal NEPA process will provide for input and coordination with other programs.
4. Special Designation: Special designations are made as support to resources which have identified needs of protection and/or designation.

# MINERALS

## Introduction

### LEASABLE MINERALS

**Oil and Gas**

There are presently no producing fields or wells in the HRRA, and there has been little exploration activity to date. Exploration within the Basin and Range Province, which includes most of the HRRA, has been sporadic and is in its incipient states, with very few test holes drilled over this huge region. The structural complexity, in addition to the low rate of success, has discouraged industry exploration. Table 2-28 shows the oil and gas and mineral potential for areas proposed for special designation.

With the discovery of oil from two small fields in Railroad Valley, Nevada (which produce from open vertical fractures), exploration has been at an elevated level in eastern Nevada since 1976, with the effect of drawing interest to Utah's West Desert.

Most of the HRRA is under oil and gas lease. Existing oil and gas leasing categories are displayed in Table 2-29.

All leasing within the planning area is noncompetitive (simultaneous and over-the-counter), because no area with known oil production potential has been discovered (Known Geologic Structure). Leasing levels and lease activities are expected to remain at about the same level in the HRRA over the planning horizon, unless significant oil and gas finds are made.

The current leasing policy for oil and gas employs a system of land categorization designed to protect natural and human resources, while providing the maximum opportunity for oil and gas exploration and development. The four categories employed include: (1) open—with standard stipulations, Category 1; (2) open—with special stipulations, Category 2; (3) open—with no surface occupancy, Category 3; and (4) closed or suspended to leasing, Category 4. Most land in the HRRA is currently Category 1 (99 percent).

**Geothermal**

The Crater Known Geothermal Resource Area (KGRA) is the only land classified as a KGRA within the resource area. Certain other areas have been identified as prospectively valuable for geothermal resources (Figure 2-20). Further exploration is necessary to determine the commercial value of the KGRA.

### LOCATABLE MINERALS

All public land is open to mineral entry and development unless previously withdrawn. Mineral exploration and development on public land will be regulated under 43 CFR 3809 to prevent unnecessary or undue degradation of the land. Validity examinations may be requested under the following conditions:

- Where a mineral patent application has been filed and a field examination is required to verify the validity of the claim(s);
- Where there is a conflict with a disposal application, it is deemed in the public interest to do so, or where the statute authorizing the disposal requires clearance of any encumbrance;
- Where the land is needed for a Federal program; or
- Where a mining claim is located under the guise of the mining laws, and flagrant unauthorized use of the land or mineral resource is occurring.

Public land would be open to mineral entry where mineral withdrawals are revoked through the withdrawal review process.

Potential locatable mineral deposits in the HRRA include antimony, arsenic, bismuth, barite, beryllium, copper, fluorite, gold, gypsum, halloysite, iron, lead, zinc, silver, manganese, tungsten, uranium, vanadium, and a variety of gemstones (beryl, garnet, topaz). Locatable minerals are those "valuable mineral deposits" which do not fall under the purview of the mineral leasing acts and do not include common varieties of sand, stone, gravel, pumice, pumicite, and clay. Mining claims are staked for locatable minerals by locating either placer or lode claims.

In the HRRA, numerous claims have been staked. Present mining activities include the Brush Wellman's beryllium operation near Delta (five open pits and a processing facility), Western State's gold operation in the Drum Mountains, and exploration drilling for gold at the north end of Swasey Mountains.

### SALEABLE MINERALS

Saleable minerals, including commom varities of sand, gravel, stone, cinders, and clay, would be sold. Their importance continues today, especially for road building and other activities associated with the oil and gas industry and maintenance of State and Federal highways. Sand and gravel, sandstone, and quartzite are commonly used.

TABLE 2-28

Mineral Potential of Areas Proposed for Special Designation

| | | Mineral Potential | | | |
|---|---|---|---|---|---|
| Site | Size (ac.) | Oil & Gas[a] | Base & Precious Metals | Geothermal | Special Features |
| Bonneville Cutthroat Trout | [b] | | | | T&E |
| Birch Creek | | | Low | Low | |
| Trout Creek | | | Good | Low | |
| Tom's Creek | | | Good | Low | |
| Indian Farm | | | Good | Low | |
| Red Cedar | | | Good | Low | |
| Cottonwood Canyon | | | Good | Low | |
| Granite Creek | | | Good | Low | |
| Basin | | | High | Low | |
| Least Chub & Dace | 3,360 | | | | T&E |
| Cold Spring | | | High | Low | |
| Coyote Spring | | | Low | Low | |
| Willow Spring | | | Low | Low | |
| Tule Spring | | | Low | Low | |
| Twin Spring | | | Low | Moderate | |
| Antelope Spring Cave | 150 | | Low | Low | Cave recreation |
| Baker Hot Spring | 160 | | Good | Moderate | Interesting geologic site |
| Dugway Geode Beds | 1,920 | | Low | Moderate | Rockhounding |
| Fumarole Butte | 160 | | Good | Moderate | Scenic values |
| Gandy Mountain Caves | 1,120 | | Low | Moderate | Unique cave resources |
| Rockwell Natural Area | 1,630 | | Good | Low | T&E |
| Paul Bunyon's Woodpile | 320 | | Low | Low | Unusual topography |

Table 2-28 (concluded)

| | | Mineral Potential | | | |
|---|---|---|---|---|---|
| Site | Size (ac.) | Oil & Gas[a] | Base & Precious Metals | Geothermal | Special Features |
| Topaz Mountain Rockhounding Area | 1,600 | | Low | Low | Rockhounding |
| Pony Express Route and Stations | 120 | | | | Historic sites |
| Dugway | | | Low | Moderate | |
| BLackrock | | | Low | Moderate | |
| Fish Springs | | | High | Moderate | |
| Boyd | | | Low | Moderate | |
| Willow Spring | | | Low | Low | |
| Civilian Conservation Corps Camps | | | Low | Low | Historic sites |
| Joy townsite (Grave Site) | 80 | | High | Low | Historic sites |
| Deep Creek Mtns | 30,740 | | High | Low | Outstanding Natural Area and unique and sensitive plant and animal species |
| Critical Winter Range--Deer | | | Low | Low | |
| Critical Deer Water Sources[c] | | | -- | -- | |
| Fawning Area--Deer[d] | | | -- | -- | |
| Critical Winter Range Elk | | | Low | Low | |
| Critical Summer Range Elk | | | Low | Low | |

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[a] All oil and gas areas are classified from speculative to very low.

[b] Included Within Deep Creek Mountains.

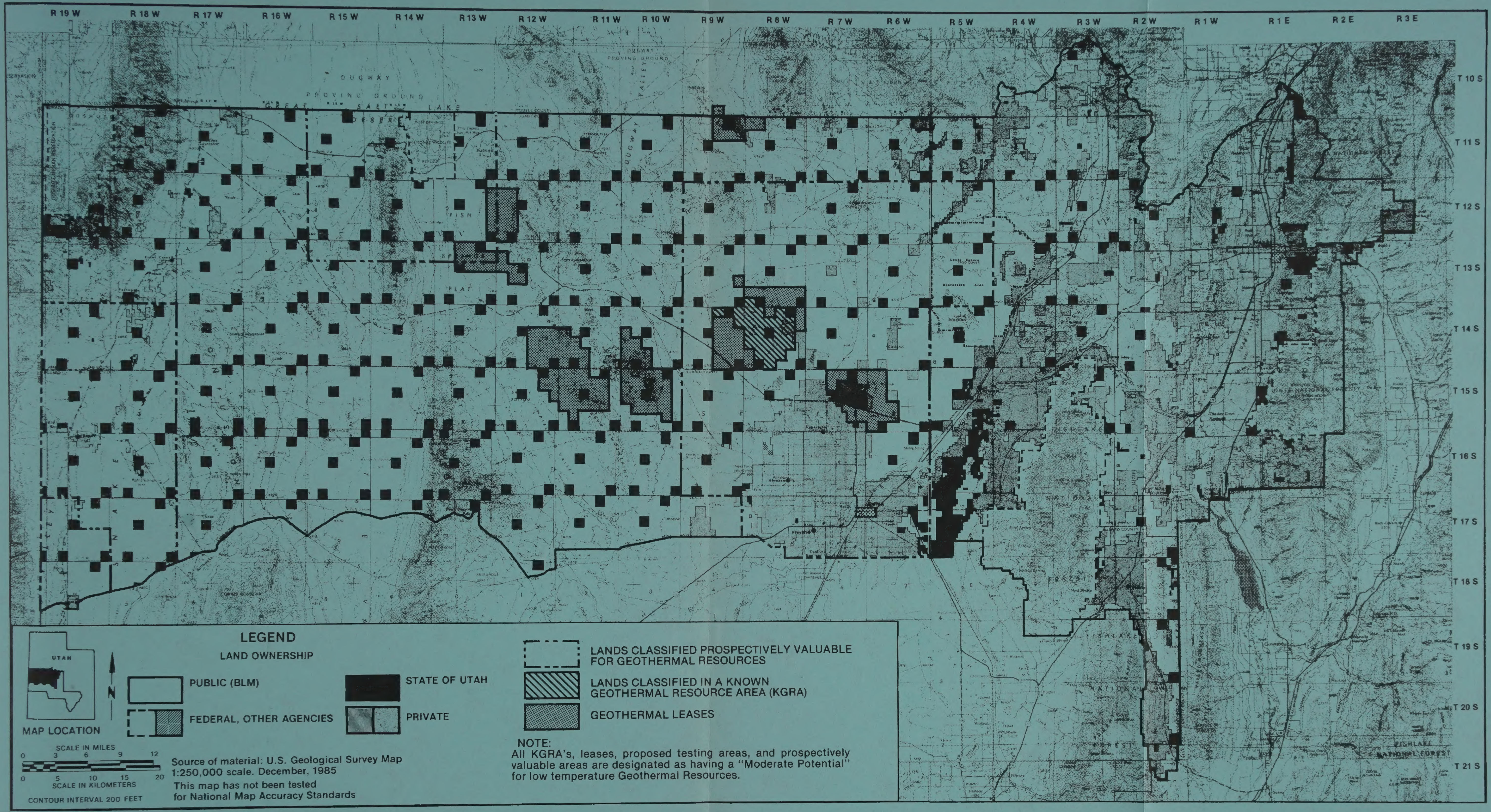
[c] Not identified.

[d] Identified in Bonneville cutthroat trout area.

TABLE 2-29

Oil and Gas Leasing Categories

| Overlay Number | Name of Resource Protected | Brief Description of Values | Present Category | Acres |
|---|---|---|---|---|
| 1 | Critical Watershed | Maple Peaks is a critical area for watershed as streams and numerous springs originate from the area which is used for human and livestock, wildlife, and farming. The area is crucial habitat for deer and sage grouse. Category 2 stipulations--No occupancy or surface disturbance within 500 feet of perennial streams and springs. In order to protect wildlife habitat--exploration activities allowed May 1 to November 30. | 2 | 10,800 |
| 2 | Deer and Elk Winter Range | This area contains crucial deer and elk winter range. In order to protect this habitat, exploration activity will be allowed only from May 1 to November 30. | 2 | 17,140 |
| 3 | Gunnison Bend Reservoir | This is a storage reservoir on the Sevier River and has very high use by picnickers, recreationish, boater, and warm water fishers. No occupancy on surface disturbance within 1,000 feet of high water line. | 2 | 80 |
| 4 | DMAD Reservoir and Sevier River | Sevier River is a fresh water stream which is used for irrigation and fills several reservoirs which are used for water recreation and fisheries. DMAD is used for water storage, farming, and fisheries. No occupancy or subsurface disturbance within 100 feet of river or 1,000 feet of high water line of reservoir. | 2 | 2,600 |
| 5. | Paul Bunyon Wood Pile Recreation Site | Columnar jointing in basalt formed this unique volcanic feature which resembles stacked firewood. | 3 | 320 |
| 6. | Baker Hot Spring | The area has several hot mineral springs which have been channeled into several hot cement tubs. People use the hot mineral water for soaking and bathing. No occupancy or surface disturbance within 1,500 feet of springs. | 2 | 160 |
| 7 | Fumarole Butte | The butte or "Hot Plug" is the upper end of a volcanic neck or vent from which lava from below was forced upward by heat and pressure. It is situated on top of a crater bench. | 3 | 160 |
| 8 | Joy Grave Site | A grave site, marking the last resting place of one of the residents of the old Joy Mining Town. | 3 | 80 |
| 9 | Gandy Mountain | Limestone caverns containing unique mineral deposits. | 3 | 320 |
| 10 | Sevier River Bridge Reservoir (Yuba Dam) | The body of water is a very important recreation site. It is known as the Lake Powell of the north and is used very heavily by recreationists. No occupancy or surface disturbance within 1,500 feet of high water line of reservoir. | 3 | 80 |
| 11 | Little Sahara Recreation and Natural Area | The area consists of moveable sand dunes interspersed with vegetative islands consisting of rare diploid atriplex and cedar trees. | 4 | 17,400 |
| 12 | Topaz Migratory Bird Refuge | A fresh water pond area with marshes which is used by waterfowl and shorebirds for nesting and rearing of young. Withdrawn as a wildlife conservancy area. | 4 | 3,360 |
| 13 | Least Chub Areas | Fresh water spring in Tule and Snake Valley which support the least chub. | 4 | 3,360 |
| 14 | Swasey Mountains | The upper two-thirds of the area consists of high, distinct peaks, steep palisade cliffs and narrow twisting canyons. The lower portion is characterized by small washes and flat desert. | 4<br>3 | 29,840<br>19,660 |
| 15 | Rockwell Natural Area | A portion of the Little Sahara Recreation Area characterized by dune topography and unique ecology (9,630 acres). | 4 | 4,750 |
|  |  | Total Acreage for HRRA |  |  |
|  |  | Category 1 |  | 2,131,436 |
|  |  | Category 2 |  | 30,780 |
|  |  | Category 3 |  | 22,490 |
|  |  | Category 4 |  | 59,190 |



Source of material: U.S. Geological Survey Map 1:250,000 scale. December, 1985
This map has not been tested for National Map Accuracy Standards

NOTE:
All KGRA's, leases, proposed testing areas, and prospectively valuable areas are designated as having a "Moderate Potential" for low temperature Geothermal Resources.

FIGURE 2- 20
GEOTHERMAL RESOURCES IN THE HOUSE RANGE RESOURCE AREA

Sand and gravel is generally confined to terraces and elevations along streams and rivers. Building stone and fill material are found in many of the more resistant ridges. Presently, sufficient volumes of these materials exist to meet foreseeable demands. New quarry sites may be developed as needed, consistent with protection of other sensitive resources. BLM has issued several Free-Use Permits for the resource area.

There is an active interest in minerals and fossil collecting by hobbists. These are collected for ornament or display purposes, such as agate, petrified wood, and invertebrate fossils. All public lands are open to hobby collecting for common invertebrate fossils and mineral specimens, unless the specific minerals are subject to prior rights (such as mining claims).

## Elements of the Plan

### GOALS AND OBJECTIVES

Provide maximum leasing opportunity for oil, gas, and geothermal exploration and development by utilizing the least restrictive leasing categories necessary to adequately protect sensitive resources.

Continue to meet public demand for saleable and free-use mineral materials on a case-by-case basis.

Prevent unnecessary and undue degradation on lands open for locatable mineral exploration and development.

## Proposed Action

### OIL AND GAS

Oil and gas leases which are cancelled, expired, or are otherwise terminated will be re-offered for lease if the area's status does not prevent it. Appropriate environmental stipulations will be attached. APDs will be processed within required time frames. Notices of Intent to Conduct Geophysical Exploration Operations will be processed within the required time frame.

Proposed oil and gas categories are: Category 1, 2,049,611 acres; Category 2, 73,685 acres; Category 3, 61,410 acres, and Category 4, 59,190 acres (Figure 2-21).

### GEOTHERMAL

Leasing categories for oil and gas would apply.

### LOCATABLE MINERALS

Location of mining claims by claimants is a nondiscretionary action on all public lands which are open to location. Locatable mineral activity is regulated under 43 CFR 3800 which provides guidance to prevent unnecessary and undue degradation of public lands. Notices and plans of operations are required for mining activities.

### SALEABLE MINERALS

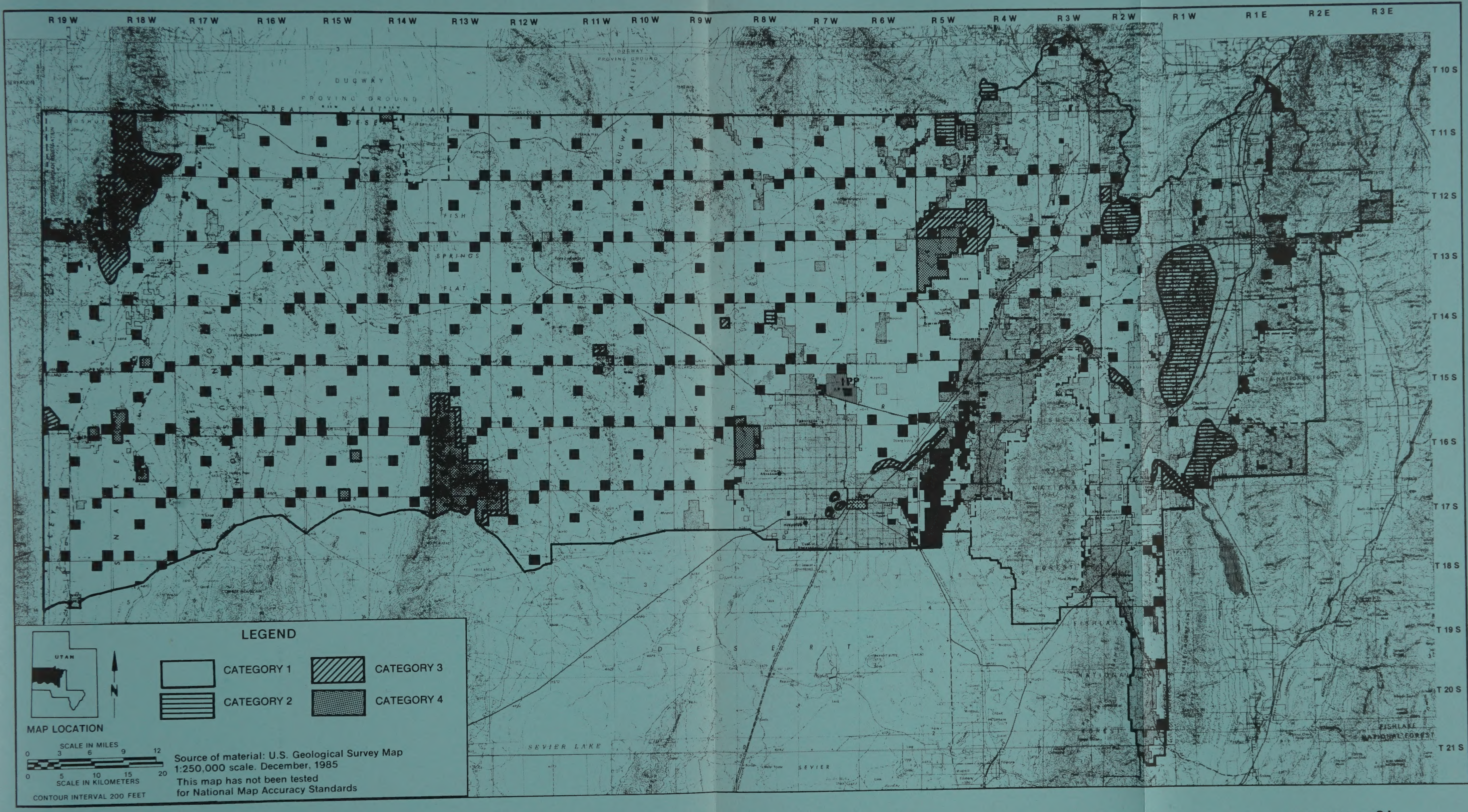
Sales permits will be processed on a case-by-case basis with appropriate mitigating measures and stipulations attached. Quantities of saleable minerals are sufficient to meet demand.

### SUPPORT AND PROGRAM COORDINATION

Continued interdisciplinary support from the resource area staff will be required to ensure on-the-ground implementation of the oil, gas, and geothermal leasing category system through the APD process. Support needs include use of archaeology, wildlife, realty, range, and recreation staff specialists.

Continued interdisciplinary support will be required to ensure protection of sensitive resource values from the impacts of mineral material development through environmental analysis. The support needs include use of the archaeology, wildlife, realty, range, and recreation staff specialists at the resource area level.

Continued interdisciplinary support will be necessary to prevent undue and unnecessary degradation through environmental analysis and compliance examinations.



Source of material: U.S. Geological Survey Map 1:250,000 scale. December, 1985
This map has not been tested for National Map Accuracy Standards

FIGURE 2- 21
PROPOSED OIL AND GAS CATEGORIES

# SOIL/WATER/WATERSHED

## Introduction

The HRRA is located in the Great Basin Hydrological Region. There are 11 perennial streams including the Sevier River (see Figure 2-8). Approximately 140 springs (3,840 acre-feet per year) and seeps, 49 wells, and 49 reservoirs (98 acre-feet per year impounded) have been identified during water inventories. Spring water generally contains calcium bicarbonate or calcium chloride, while well water is generally sodium chloride or sodium bicarbonate. Almost no water quality data has been collected from reservoirs. Forty-three allotments in the resource area have been identified as having non-point source water pollution under Section 208 of the Federal Water Pollution Control Act (see Table 2-30).

### GROUND WATER

Aquifers of the resource area are in three basins (see Figure 2-8), Southern Great Salt Lake desert, Sevier Desert, and Sevier River. Table 2-31 lists the allotments containing major ground water recharge areas.

#### Southern Great Salt Lake Desert

In the shallow brine aquifer, ground water probably moves from recharge areas on alluvial fans bordering mountain range toward saline mudflats, where it discharges by evaporation.

The alluvial fan and basin fill aquifers water infiltrates into upper ponds of the alluvial fans along the mountains, then moves laterally toward the saline mudflats, and mostly discharges by evapotranspiration in areas of phreatophytes along the margins of the flats.

Other aquifers include unconsolidated alluvial deposits in stream channels in the mountains and consolidated rocks. Little is known of aquifer properties and recharge or movement and storage of ground water in these aquifers.

Large amounts of ground water occur; most is poor quality and in fine-grained unconsolidated deposits that yield only a few gallons per minute of water to wells. Large quantities of fresh to slightly saline ground water are found only in areas north of Snake Valley and where Deep Creek enters the southern desert.

#### Sevier Desert

The Sevier Desert is a hydrologic unit that has water entering from all sides. This water moves in the general direction of Sevier Lake. In this unit, fluviatile deposits of the Sevier River are interbedded with alluvial-fan, lacustrine, and eolian deposits; the result is a multi-aquifer system. In much of the basin, the aquifer system exceeds 1,000 feet in thickness and comprises a lower artesian aquifer, an upper artesian aquifer, and a water-table aquifer.

#### Sevier River Basin

Precipitation that falls directly on the area is the source of nearly all the ground water in the area. However, some water moves into the subsurface area from the Sevier River basin upstream.

The main recharge period in the area is during the spring snowmelt. At that time, most ground-water reservoir recharge in the alluvium is in the form of seepage from stream channels, where they emerge from canyons onto permeable alluvial fans. In addition, the fans absorb part of the precipitation that falls directly on them. Some recharge results by seepage from irrigation canals and irrigated land. The alluvium also receives some recharge by direct subsurface inflow from consolidated aquifers in the mountains.

Ground water occurs in both unconsolidated and consolidated rocks, forming reservoirs in the unconsolidated alluvium in the valleys. Most of these reservoirs are separated by consolidated rocks, which act as barriers. However, in some places the consolidated rocks contain considerable quantities of water, particularly in solution channels.

Ground water in the area occurs under both water-table (unconfined) and artesian (confined) conditions.

In the southeastern part of the Sevier River Basin, the lower parts of the valleys are areas of high evapotranspiration in which the chief phreatophyte is saltgrass. Each area includes several square miles in which ground water (mainly under artesian pressure) seeps to the surface or is discharged by springs and flowing wells. The areas have a depth to water of less than 10 feet.

### WATER RIGHTS

The BLM is in the process of obtaining water rights. Certificates or Diligence Claims are being obtained for water sources, including wells and springs.

### WATER USES

Water uses include irrigation, industrial, livestock, wildlife, and culinary at Little Sahara Recreation Area.

## TABLE 2-30

## Allotments Identified as Having Non-Point Source Pollution From Erosion

Beryllium
Big Hollow
Blue Spring
Broad Canyon
Cal's Valley
Chicken
Chriss Creek
Cove
Cutler
Deers Foot
Dust Bowl
Finlinson 21A
Fool Creek 1
Fool Creek 2
Gilson
Jakes Canyon
Juab
Klondike
Levan
Lunt-Latimer
Lynndyl
McIntyre
Middle Fork
Mills
Nephi Bench
North Scipio
Oak City
Paint Mine
Red Butte
Rocky Ford
Sage Valley 16
Sage Valley 17
Salt Creek
Sand Pass
Sevier River
Snadge Hollow
Spring Canyon
Stone
Stone Quarry
Valley Mountain
Washboard
West Mona
Yuba

## TABLE 2-31

## Allotments Containing Major Underground Water Recharge Areas

- Antelope[a]
- Bitner Knoll[a]
- Blue Spring
- Boulter
- Boyd Station[a]
- Callao Bench
- Cove
- Cowboy Pass[a]
- Coyote Knolls[a]
- Crater
- Death Canyon[a]
- Desert Mountain
- Devil Gate[a]
- Dust Bowl
- East Fish Spring
- East Topaz
- Finlinson 21A
- Flint
- Freighter
- Gandy
- Gilson
- Henry Creek
- Jakes Canyon[a]
- Jenny Lind
- Juab
- Kane Spring
- Kimball Creek[a]
- Knoll Spring
- Lady Laird[a]
- Little Drum[a]
- Maple Peak[a]
- Marble Wash
- McIntyre
- Meadow Creek
- Nephi Bench
- North Scipio[a]
- Okelberry[a]
- Paint Mine[a]
- Partoun
- Red Butte
- Riverbed
- Rocky Ford
- Sand Pass[a]
- Sevier River[a]
- Smith Creek
- Spor Mountain
- Swazey Knoll[a]
- Table Mountain[a]
- Tatow
- Tintic Pasture
- Thousand Peaks
- Trail Herds
- Tule Spring[a]
- Valley Mountain[a]
- Warm Creek
- West Mona
- Wildhorse[a]

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[a] Could be subject to overgrazing for the short term at preference level.

### WATERSHED TREATMENT

Several vegetation treatment practices are commonly used for watershed improvement. Methods used in the HRRA include chaining, burning, disc plowing, and pipe harrowing. Successful seedings have been established in many of the sagebrush and pinyon-juniper associations. This has allowed the land to be seeded to species which afford better soil protection. About 41,000 acres have been seeded, and approximately 89,000 additional acres have good seeding capabilities.

### SOILS

Soils of the HRRA are found in desert basins and on roughly parallel mountain ranges located in the Great Basin portion of Western Utah. Approximately 3 percent of the resource area is high mountain steep, well-drained soils on mountains and foothills in the humid climate zone. About 5 percent is mountain, steep, and very steep soils and rock outcrop on mountain sides in the moist sub-humid climate zone. About 12 percent is upland, well-drained, level to steep soils on mountain slopes, colluvial and alluvial fans in the dry sub-humid climate zone. About 35 percent is semi-desert well-drained, level to steep soils on hills, lake terraces, alluvial fans in a semi-arid climate zone. About 45 percent is desert, well-drained to excessively-drained, level to steep soils on hills, lake terraces, and alluvial fans in an arid climate zone.

A general soils map of the HRRA shows 23 soil associations. Included in the 23 are four associations (11a 16a, 18a, and 22a) from a detailed soil survey of the Delta area, issued in May 1977 (Figure 2-22).

More detailed information can be found in the Soil Survey report covering the specific area. Soil Surveys in the HRRA are: Fairfield-Nephi Area, Utah (USDA, SCS, 1984a); Delta Area, Part of Millard County (USDA, SCS, 1977); House Range Soil Survey (USDA, SCS, 1984b). A survey of the Lynndyl-Scipio area was field completed in July 1985. An older soil survey (Richfield Area Utah, Series 1944 No. 9) (USDA, SCS, 1958) covers some of the area around Scipio, Utah.

HRRA soils range from non-saline to very strongly saline, and some are moderately to strongly alkali (sodic). A few soils have concentrations of both soluble salts and alkali (saline-alkali soils). Approximately 725,000 acres are strongly saline, 324,000 acres are moderately saline, and 714,000 acres are slightly saline (Wilson et al., 1975). These affected soils are found on the lower slopes of some alluvial fans, flood plains, lake plains, lake terraces, and playas.

### EROSION CONDITION

Erosion activity of the resource area was determined during inventories by using soil surface factors (SSFs) to arrive at the erosion condition class. Percentage and acreage of erosion condition classes are shown by allotment for the resource area on Table 2-32. There are no soils in the severe erosion class in the inventoried portion of the resource area. The critical erosion areas are natural in nature, having been caused by wind action on salt flats, playas, and sandy soils. Therefore, not much improvement could be expected in these areas.

## Elements of the Plan

### GOALS AND OBJECTIVES

Improve watershed conditions on areas identified with significant erosion condition problems and on other sensitive watershed areas (riparian areas), where such areas are identified. Avoid the deterioration or improve watershed condition on all other Federal lands.

Assure an adequate supply of water for existing and proposed BLM management activities. Ensure production of quality water as required by State and Federal legislative acts and regulations for on-site and downstream users. Coordinate with the proper local, State, and Federal authorities on water-related issues.

## Proposed Action

Identify water source quality and quantity, along with water rights documentation, in compliance with State and EPA regulations. Monitoring of channel erosion studies and climate stations (OMNI) will continue.

Monitoring of grazing use will be emphasized on those allotments where degradation is identified, present ecological condition is declining or poor watershed conditions exist. The results of this monitoring will be used to determine future grazing use.

Begin preparation of a resource area watershed plan.

1. Continue a search of existing data pertaining to ground water and site conditions necessary to maintain site condition in identified areas where initial data indicates condition should be improved to maintain site productivity.
2. Field check existing data for above.

TABLE 2-32

HRRA Erosion Condition Class by Allotment

| | | Total | Erosion Condition Classes (BLM Lands*) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | BLM | Stable | | Slight | | Moderate | | Critical | | No Data | | State | | Private | |
| Allotment | Acres | Acres | % | Acres | % | Acres | % | Acres | % | Acres | % | Acres | % | Acres | % | Acres |
| Antelope | 79,213 | 72,102 | | | 73 | 57,702 | | | | | 18 | 14,400 | 9 | 7,111 | | |
| Beryllium | 10,904 | 8,367 | | | 40 | 4,352 | 34 | 3,680 | 3 | 335 | | | 1 | 80 | 22 | 2,457 |
| Big Hollow | 4,728 | 3,978 | | | | | | | | | 84 | 3,978 | 16 | 750 | | |
| Bitner Knoll | 23,195 | 21,170 | 1 | 235 | 23 | 5,335 | | | | | 67 | 15,600 | 9 | 2,025 | | |
| Blue Spring | 3,485 | 2,445 | | | | | | | | | 70 | 2,445 | 18 | 640 | 12 | 400 |
| Boulter | 8,254 | 6,613 | | | 80 | 6,613 | | | | | | | 8 | 658 | 12 | 983 |
| Boyd Station | 24,971 | 21,173 | | | 84 | 20,923 | 1 | 250 | | | | | 14 | 3,528 | 1 | 270 |
| Broad Canyon | 8,061 | 4,512 | | | 10 | 790 | 46 | 3,722 | | | | | 8 | 660 | 36 | 2,889 |
| Callao | 23,233 | 20,794 | | | 81 | 18,704 | 9 | 2,090 | | | | | 10 | 2,319 | 1 | 120 |
| Callao Bench | 20,003 | 18,603 | | | 88 | 17,603 | 5 | 1,000 | | | | | 7 | 1,360 | 1 | 40 |
| Cal's Valley | 2,290 | 2,244 | | | | | | | | | 98 | 2,244 | | | 2 | 46 |
| Cedar Springs | 1,447 | 628 | | | | | | | | | 43 | 678 | | | 57 | 819 |
| Chalk Knolls | 51,738 | 45,527 | | | 46 | 23,800 | 42 | 21,727 | | | | | 3 | 1,800 | 9 | 4,411 |
| Cherry Creek | 42,450 | 36,562 | | | 56 | 23,812 | 30 | 12,750 | | | | | 9 | 3,888 | 5 | 2,000 |
| Chicken Creek | 1,115 | 495 | | | | | | | | | 45 | 495 | 5 | 60 | 50 | 560 |
| Chriss Creek | 1,775 | 1,144 | | | | | | | | | 64 | 1,144 | | | 36 | 631 |
| Cove | 4,793 | 3,183 | | | | | | | | | 66 | 3,183 | | | 34 | 1,610 |
| Cowboy Pass | 45,885 | 41,059 | | | 88 | 40,439 | 1 | 300 | | | 1 | 320 | 11 | 4,826 | | |
| Coyote Knolls | 41,485 | 34,934 | | | 76 | 31,419 | 6 | 2,365 | | | 2 | 1,150 | 16 | 6,551 | | |
| Crater | 64,671 | 56,581 | | | 83 | 53,981 | 4 | 2,600 | | | | | 13 | 8,090 | | |
| Cutler | 120 | 120 | | | | | | | | | 100 | 120 | | | | |
| Death Canyon | 58,241 | 50,366 | 27 | 15,701 | 58 | 33,500 | | | | | 2 | 1,165 | 12 | 7,234 | 1 | 641 |
| Deer's Foot | 1,708 | 1,668 | | | | | | | | | 98 | 1,668 | | | 2 | 40 |
| Desert Mountain | 44,292 | 36,810 | 5 | 2,210 | 58 | 25,720 | 20 | 8,880 | | | | | 11 | 4,900 | 6 | 2,582 |
| Devil Gate | 4,564 | 4,159 | | | 91 | 4,159 | | | | | | | 9 | 405 | | |
| Dust Bowl | 15,196 | 11,326 | | | | | | | | | 75 | 11,326 | 7 | 1,140 | 18 | 2,730 |
| East Fish Spring | 57,022 | 50,930 | | | | | | | | | 89 | 50,930 | 11 | 6,092 | | |
| East Topaz | 32,326 | 29,126 | | | 65 | 21,036 | | | | | 25 | 8,090 | 10 | 3,200 | | |
| Ferner Dog Valley | 18,785 | 16,597 | | | 21 | 3,979 | 67 | 12,618 | | | | | 10 | 1,721 | 2 | 467 |
| Finlinson 21A | 1,351 | 1,351 | | | | | 100 | 1,351 | | | | | | | | |
| Flint | 17,576 | 16,176 | 2 | 350 | 77 | 13,540 | 13 | 2,286 | | | | | 8 | 1,400 | | |
| Fool Creek 1 | 1,079 | 959 | | | 89 | 959 | | | | | | | | | 11 | 120 |
| Fool Creek 2 | 367 | 120 | | | | | | | 33 | 120 | | | | | 67 | 247 |
| Freighter | 14,846 | 13,216 | | | 89 | 13,216 | | | | | | | 11 | 1,630 | | |
| Gandy | 58,972 | 52,515 | | | 81 | 47,795 | 8 | 4,720 | | | | | 9 | 5,362 | 2 | 1,095 |
| Garrett | 1,220 | 780 | | | | | 64 | 780 | | | | | | | 36 | 440 |
| Gilson | 31,824 | 20,582 | | | 15 | 4,682 | 50 | 15,900 | | | | | 9 | 2,814 | 26 | 8,428 |
| Henry Creek | 6,270 | 6,200 | | | 99 | 6,200 | | | | | | | 1 | 70 | | |
| Jakes Canyon | 2,069 | 2,069 | | | | | | | | | 100 | 2,069 | | | | |
| Jenny Lind | 5,825 | 1,321 | | | 23 | 1,321 | | | | | | | | | 77 | 4,504 |
| Juab | 2,438 | 1,253 | | | | | | | | | 51 | 1,253 | | | 49 | 1,185 |
| Kane Spring | 3,296 | 2,976 | 13 | 430 | 77 | 2,546 | | | | | | | 10 | 320 | | |
| Kimball Creek | 26,850 | 20,600 | | | 19 | 5,200 | 21 | 5,540 | | | 37 | 9,860 | 2 | 509 | 21 | 5,741 |
| Klondike | 2,552 | 2,072 | | | | | | | | | 81 | 2,072 | 19 | 480 | | |
| Knoll Spring | 12,887 | 11,652 | | | 48 | 6,252 | 42 | 5,400 | | | | | 10 | 1,235 | | |
| Lady Laird | 60,022 | 53,797 | | | 73 | 43,542 | 2 | 1,200 | | | 15 | 9,055 | 8 | 5,075 | 2 | 1,150 |
| Levan | 4,890 | 3,390 | | | | | | | | | 69 | 3,390 | | | 31 | 1,500 |
| Little Drum | 76,382 | 66,914 | | | 85 | 64,614 | | | | | 3 | 2,300 | 12 | 9,468 | | |
| Lunt-Latimer | 5,917 | 592 | | | | | 10 | 592 | | | | | 4 | 259 | 86 | 5,066 |
| Lynndyl | 14,036 | 11,154 | | | 24 | 3,394 | 55 | 7,760 | | | | | 18 | 2,480 | 3 | 402 |
| Maple Peak | 77,722 | 59,520 | | | 64 | 50,194 | 10 | 7,772 | 2 | 1,554 | | | 4 | 3,000 | 20 | 15,202 |
| Marble Wash | 23,745 | 21,776 | | | 92 | 21,776 | | | | | | | 8 | 1,969 | | |
| McIntyre | 61,935 | 54,610 | 12 | 7,645 | 33 | 20,752 | 3 | 1,638 | 40 | 24,575 | | | 8 | 4,703 | 4 | 2,622 |
| Meadow Creek | 51,219 | 46,355 | 6 | 3,372 | 80 | 41,115 | 4 | 1,868 | | | | | 9 | 4,744 | 1 | 120 |
| Middle Fork | 5,111 | 3,178 | | | | | | | | | 62 | 3,178 | | | 38 | 1,933 |
| Mills | 5.007 | 4.353 | | | | | | | | | 87 | 4,353 | | | 13 | 654 |
| Mountain | 19,390 | 13,750 | | | 66 | 12,790 | | | | | 5 | 960 | 10 | 1,950 | 19 | 3,690 |
| Nelson | 8,972 | 8,288 | | | 56 | 5,024 | | | 36 | 3,264 | | | 8 | 684 | | |
| Nephi Bench | 2,011 | 1,382 | | | 35 | 700 | 34 | 682 | | | | | 24 | 489 | 7 | 140 |
| North Scipio | 10,078 | 4,525 | | | | | | | | | 45 | 4,525 | 5 | 550 | 50 | 5,003 |
| Oak City | 37,610 | 19,281 | | | 29 | 10,990 | 3 | 1,157 | 19 | 7,134 | | | 45 | 16,782 | 4 | 1,547 |
| Okelberry | 16,531 | 5,633 | | | 14 | 2,318 | 20 | 3,315 | | | | | 9 | 1,507 | 57 | 9,391 |
| Paint Mine | 3,434 | 2,674 | | | 24 | 820 | 54 | 1,854 | | | | | 22 | 760 | | |
| Partoun | 92,186 | 71,983 | | | 61 | 56,290 | 17 | 15,693 | | | | | 16 | 15,119 | 6 | 5,084 |
| Red Butte | 8,083 | 7,291 | | | | | | | | | 90 | 7,291 | 7 | 561 | 3 | 231 |
| Riley Spring | 4,319 | 3,469 | | | | | 80 | 3,469 | | | | | 20 | 850 | | |
| Riverbed | 58,255 | 52,175 | 28 | 16,250 | 62 | 35,925 | | | | | | | 10 | 6,080 | | |
| Rocky Ford | 10,008 | 10,008 | | | 4 | 400 | 70 | 7,006 | | | 26 | 2,602 | | | | |
| Round Valley | 5,765 | 3,639 | | | | | | | | | 63 | 3,639 | 11 | 626 | 26 | 1,500 |
| Sage Valley 16 | 5,141 | 4,916 | | | | | | | | | 96 | 4,916 | | | 4 | 225 |
| Sage Valley 17 | 12,065 | 11,044 | | | | | | | | | 92 | 11,044 | 8 | 1,021 | | |
| Salt Creek | 14,907 | 3,323 | | | | | | | | | 22 | 3,323 | | | 78 | 11,584 |
| Sand Pass | 36,160 | 32,222 | | | 57 | 20,522 | | | | | 32 | 11,700 | 11 | 3,938 | | |
| Sevier River | 8,979 | 5,331 | | | | | | | | | 60 | 5,331 | 11 | 1,004 | 29 | 2,644 |
| Shearing | 36,563 | 32,629 | | | 32 | 11,746 | 56 | 20,557 | 1 | 326 | | | 5 | 1,891 | 6 | 2,043 |
| Sheep | 27,154 | 25,114 | 3 | 700 | 57 | 15,414 | 33 | 9,000 | | | | | 5 | 1,400 | 2 | 640 |
| Sheeprocks | 25,800 | 20,787 | | | 6 | 1,250 | 57 | 11,850 | | | 37 | 7,687 | 7 | 1,729 | 13 | 3,284 |
| Smelter Mountain | 74,048 | 60,057 | | | 21 | 15,629 | 60 | 44,428 | | | | | 11 | 8,021 | 8 | 5,970 |
| Smith Creek | 17,820 | 15,219 | | | 85 | 15,139 | 1 | 80 | | | | | 15 | 2,601 | | |
| Snadge Hollow | 3,479 | 3,399 | | | | | | | | | 98 | 3,399 | 2 | 80 | | |
| Spring Canyon | 10,235 | 4,562 | | | | | | | | | 45 | 4,562 | | | 55 | 5,673 |
| Spor Mountain | 58,779 | 53,053 | | | 41 | 24,253 | | | | | 49 | 28,800 | 9 | 5,166 | 1 | 560 |
| Stone | 3,043 | 2,303 | | | | | | | | | 76 | 2,303 | 21 | 640 | 3 | 100 |
| Stone Quarry | 4,554 | 3,466 | | | | | | | | | 76 | 3,466 | | | 24 | 1,088 |
| Summit | 3,752 | 3,752 | | | | | | | | | 100 | 3,752 | | | | |
| Sugarville | 57,275 | 51,391 | 5 | 3,084 | 38 | 21,584 | 40 | 23,126 | 7 | 3,597 | | | 6 | 3,324 | 4 | 2,560 |
| Swazey Knoll | 53,709 | 47,282 | | | 80 | 42,802 | | | | | 8 | 4,480 | 12 | 6,427 | | |
| Table Mountain | 41,008 | 36,459 | 30 | 12,344 | 24 | 9,875 | 21 | 8,640 | | | 14 | 5,600 | 11 | 4,549 | | |
| Tatow | 65,407 | 56,839 | | | 78 | 50,695 | | | | | 9 | 6,144 | 13 | 8,568 | | |
| Tintic Pasture | 3,618 | 3,618 | | | 78 | 2,822 | 22 | 796 | | | | | | | | |
| Thousand Peaks | 375,439 | 332,022 | | | 69 | 258,362 | 11 | 42,060 | | | 8 | 31,600 | 12 | 43,417 | | |
| Topaz | 3,324 | 3,124 | | | 94 | 3,124 | | | | | | | | | 6 | 200 |
| Trail Herds | 24,355 | 22,617 | | | 47 | 11,417 | | | | | 46 | 11,200 | 6 | 1,448 | 1 | 290 |
| Tule Spring | 16,466 | 14,986 | | | 78 | 12,846 | 13 | 2,140 | | | | | 9 | 1,480 | | |
| Tule Valley | 17,060 | 14,500 | | | 41 | 6,954 | 31 | 5,246 | | | 13 | 2,300 | 15 | 2,560 | | |
| Valley Mountain | 3,284 | 1,818 | | | | | | | | | 55 | 1,818 | | | 45 | 1,466 |
| Warm Creek | 9,010 | 8,050 | 89 | 8,050 | | | | | | | | | 11 | 960 | | |
| Washboard | 8,157 | 4,477 | | | | | | | | | 55 | 4,477 | 6 | 520 | 39 | 3,160 |
| West Mona | 17,436 | 17,316 | | | 20 | 3,500 | 35 | 6,100 | | | 44 | 7,716 | | | 1 | 120 |
| Wildhorse | 49,743 | 44,383 | | | 31 | 15,383 | | | | | 58 | 29,000 | 11 | 5,360 | | |
| Yuba | 6,150 | 3,850 | | | | | | | | | 63 | 3,850 | 4 | 300 | 33 | 2,000 |
| 12 B | 360 | 200 | | | 42 | 150 | 14 | 50 | | | | | | | 44 | 160 |
| Total[a] | 2,642,280 | 2,230,904 | 3 | 70,371 | 63 | 1,409,689 | 15 | 336,038 | 2 | 40,905 | 17 | 373,901 | | 266,918 | | 144,458 |

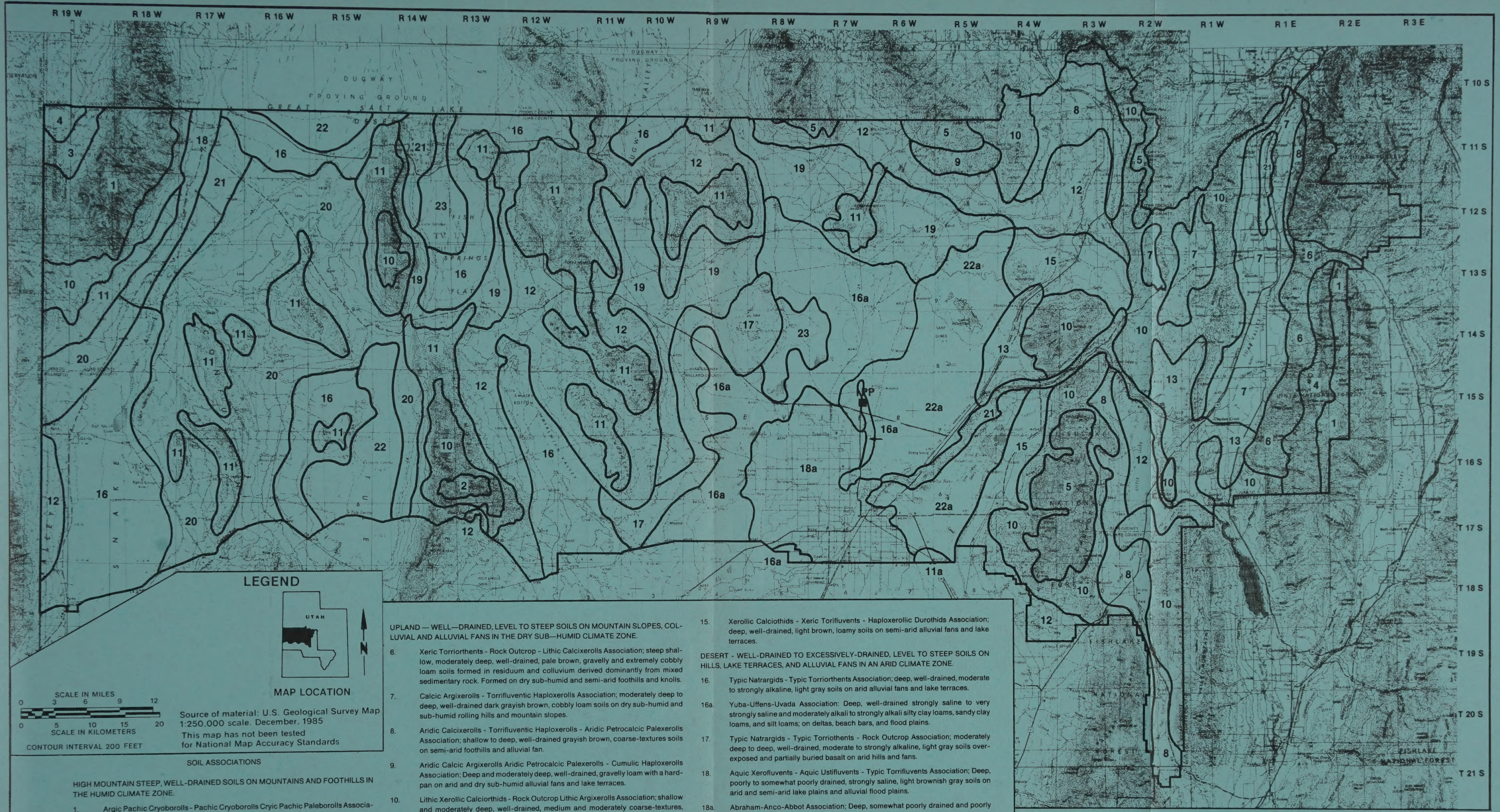
*There are no soils in the Severe Erosion Condition Class.

[a] Includes only allotments.

3. Rank or prioritize problem areas identified in order of resource values to be lost.
4. Initiate site-specific plan to improve area where resource values are being lost.

## SUPPORT NEEDS AND PROGRAM COORDINATION

Clerical support would be necessary. Division of Operations support would be necessary for design and construction of certain projects, for contracting on some projects, and for the periodic upkeep of all projects. Clearances for T&E species, mineral resources, and archaeological values would require the support of those respective resources.



Source of material: U.S. Geological Survey Map
1:250,000 scale. December, 1985
This map has not been tested
for National Map Accuracy Standards

**FIGURE 2- 22**
**GENERAL SOILS MAP**

SOIL ASSOCIATIONS

HIGH MOUNTAIN STEEP, WELL-DRAINED SOILS ON MOUNTAINS AND FOOTHILLS IN THE HUMID CLIMATE ZONE.

1. Argic Pachic Cryoborolls - Pachic Cryoborolls Cryic Pachic Paleborolls Association; moderately deep to very deep, dark to light colored, neutral to medium acid, loamy to cobbly loam soil of the humid and moist sub-humid high mountains.

2. Lithic Cryoborolls - Mollic Cryoborolls - Typic Cryochrepts - Rock outcrop Association; Shallow to moderately deep, brown to dark brown, medium to strongly acid soils, with fractured bedrock below a depth of about 36 inches. Cobbly loam textured on humid high sedimentary and igneous mountains.

MOUNTAIN STEEP AND VERY STEEP SOILS AND ROCK OUTCROP ON MOUNTAINSIDES IN THE MOIST SUB—HUMID CLIMATE ZONE.

3. Typic Calcixerolls - Lithic Xerorthents Calcic Argixerolls Association; Moderately deep to deep, well-drained, dark colored soils, neutral to medium acid, loamy to very stony loams on moist sub-humid and dry sub-humid mountains, plateaus and mountain valleys.

4. Lithic Calcixerolls - Lithic Xerollic Calciorthids Argic Pachic Argiborolls Association; shallow and deep, well-drained, steep and very steep, dark brown cobbly loam, colluvium and residuum from limestone and sandstone, formed on dry and moist sub-humid foothills and mountains.

5. Lithic Argixerolls - Lithic Haploxerolls - Pachic Argiborolls - Rock Outcrop Association; shallow, well-drained, dark grayish-brown, cobbly and stony loams, forming from colluvium and residuum from limestone, sandstone and igneous rock on sub-humid steep mountain sides and rock outcrop ledges.

UPLAND — WELL—DRAINED, LEVEL TO STEEP SOILS ON MOUNTAIN SLOPES, COLLUVIAL AND ALLUVIAL FANS IN THE DRY SUB—HUMID CLIMATE ZONE.

6. Xeric Torriorthents - Rock Outcrop - Lithic Calcixerolls Association; steep shallow, moderately deep, well-drained, pale brown, gravelly and extremely cobbly loam soils formed in residuum and colluvium derived dominantly from mixed sedimentary rock. Formed on dry sub-humid and semi-arid foothills and knolls.

7. Calcic Argixerolls - Torrifluventic Haploxerolls Association; moderately deep to deep, well-drained dark grayish brown, cobbly loam soils on dry sub-humid and sub-humid rolling hills and mountain slopes.

8. Aridic Calcixerolls - Torrifluventic Haploxerolls - Aridic Petrocalcic Palexerolls Association; shallow to deep, well-drained grayish brown, coarse-textures soils on semi-arid foothills and alluvial fan.

9. Aridic Calcic Argixerolls Aridic Petrocalcic Palexerolls - Cumulic Haploxerolls Association; Deep and moderately deep, well-drained, gravelly loam with a hardpan on arid and dry sub-humid alluvial fans and lake terraces.

10. Lithic Xerollic Calciorthids - Rock Outcrop Lithic Argixerolls Association; shallow and moderately deep, well-drained, medium and moderately coarse-textures, light brown soils formed in residuum and colluvium from limestone and dolomite sedimentary rock. Formed on dry and moist sub-humid foothills and mountains.

SEMI—DEEP WELL—DRAINED, LEVEL TO STEEP SOILS ON HILLS, LAKE TERRACES, ALLUVIAL FANS IN A SEMI—ARID CLIMATE ZONE.

11. Lithic Xerollic Hapiargids - Lithic Xerollic Calciorthids - Rock Outcrop Association; shallow well-drained, light brown extremely cobbly, moderate to strongly alkaline soils developed from residuum from igneous and sedimentary material on semi-arid, steep mountain slopes and ridge tops.

11a. Hiko Springs Checkett-Rock Land Association: Deep and shallow, well-drained and excessively drained sandy loams, very cobbly loams, and Rock land; on terraces and mountainsides.

12. Xerollic Durothids - Xerollic Calciorthids - Xeric Torrifluvents Association; shallow to deep, well-drained, light brown, coarse loamy soils on semi-arid hills, slopes and alluvial fans.

13. Xeric Torrifluvents - Xerollic Natrargids Association; very deep, well-drained, level to gently sloping soils on alluvial fans within the semi-arid alluvial plains.

14. Xerollic Natrargids - Xeric Torrifluvents Association; Deep moderate to strongly alkaline, light gray, moderate to well-drained soils on arid and semi-arid lake plains and undulating hills.

15. Xerollic Calciothids - Xeric Torifluvents - Haploxerollic Durothids Association; deep, well-drained, light brown, loamy soils on semi-arid alluvial fans and lake terraces.

DESERT - WELL-DRAINED TO EXCESSIVELY-DRAINED, LEVEL TO STEEP SOILS ON HILLS, LAKE TERRACES, AND ALLUVIAL FANS IN AN ARID CLIMATE ZONE.

16. Typic Natrargids - Typic Torriorthents Association; deep, well-drained, moderate to strongly alkaline, light gray soils on arid alluvial fans and lake terraces.

16a. Yuba-Uffens-Uvada Association: Deep, well-drained strongly saline to very strongly saline and moderately alkali to strongly alkali silty clay loams, sandy clay loams, and silt loams; on deltas, beach bars, and flood plains.

17. Typic Natrargids - Typic Torriothents - Rock Outcrop Association; moderately deep to deep, well-drained, moderate to strongly alkaline, light gray soils over-exposed and partially buried basalt on arid hills and fans.

18. Aquic Xerofluvents - Aquic Ustifluvents - Typic Torrifluvents Association; Deep, poorly to somewhat poorly drained, strongly saline, light brownish gray soils on arid and semi-arid lake plains and alluvial flood plains.

18a. Abraham-Anco-Abbot Association; Deep, somewhat poorly drained and poorly drained, slightly saline to strongly saline and slightly alkali loams, silty clay loams and silty clays; on lake plains and flood plains.

19. Typic Torriorthents - Typic Torrifluvents - Typic Haplargids Association; Very deep, well-drained, medium to moderately coarse-textured, pale brown soils on arid alluvial plains and lake terraces.

20. Typic Calciothids-Typic Torriorthents Association; Deep, well-drained pale brown, moderate to strongly alkaline soils on arid alluvial fans and lake terraces.

21. Fluvaquentic Halustolls Typic Salorthids - Typic Calciaquolls Association; Deep, very poorly to somewhat poorly drained, fine loamy to fine silty textured, gray to light gray, neutral to very strongly alkaline saline soil on arid valley bottoms.

22. Typic Torripsamments - Typic Torriothents Associations; Deep, well-drained to excessively-drained sand to loamy sand textured, reddish yellow to gray mildly to moderately alkaline soils on arid and semi-arid undulating to rolling dunes on lake terraces and uplands.

22a. Yenrab-Uvada Association: Deep, well-drained, and somewhat exessively-drained, strongly saline to very strongly saline and moderately alkali to strongly alkali sands and silt loams; on terraces and plains.

23. Playas - nearly flat, deep, clayey textured with strong accumulaations of salt, mostly devoid of vegetation and within the ancient Lake Bonneville reaches.

# FOREST RESOURCES

## Introduction

Forest resources in the HRRA consist of stands of mixed conifer timber (fir, spruce, pine), aspen, and pinyon-juniper woodlands. Scattered stands of mixed conifer timber are found at higher elevations in the Swasey and HRRA portion of the Deep Creek Mountains. These areas also have limited scattered stands of aspen. Throughout the resource area are extensive areas of pinyon-juniper woodlands on lower mountain slopes and hills. Figure 2-23 depicts the general locations of HRRA forest resources.

### TIMBER AND ASPEN RESOURCES

About 1,200 acres of mixed conifer timber are in the Swasey Mountains in the south-central portion of the resource area. An additional 9,100 acres of mixed conifers are in the Deep Creek Mountains. The timber is similar in both areas. The stands are predominantly old growth, found at higher elevations, on steep north and east slopes, and generally in isolated locations. Both areas contain stands of bristlecone and limber pine near ridge tops.

Though there has not been any inventory, the total volume of timber in the HRRA is estimated to be approximately 625 thousand board feet (MBF). Most of the timber resource is on steep slopes (greater than 40 percent) without present access; only about 15 percent is in areas with current access.

The West Desert MFP (1973) stated that timber resources in the Deep Creek Mountains should be protected from commercial harvest (set aside from the management base). The decision was to manage them in support of other BLM programs (recreation, watershed, wildlife [including T&E species], range, etc.). None of the timber resources were considered suitably stocked or located for commercial harvest operations.

The timber resources in the Swasey Mountains (a proposed primitive area prior to initiation of the wilderness study process) were under restrictive management to protect the area's primitive and ecological values. In general, the limited quantity of timber resources present, lack of access, and steep rugged topography of sites restrict the potential for commercial harvest.

The approximately 1,200 acres of aspen in the HRRA are found in the same general areas as the mixed conifer timber. No inventory of the volume of this predominantly old growth resource has been done. There is no recorded use of the aspen, though some has probably been gathered for firewood by recreationists and homeowners.

Except for limited logging around the turn of the century and a trespass cut of 1.4 MBF in 1980, there is no record of timber harvest in the HRRA.

## WOODLAND RESOURCES

Pinyon-juniper is found at lower elevations in the mountains and on hills and benches throughout the resource area. The pinyon-juniper vegetation type covers 4.5 percent (102,000 acres) of the resource area. In addition, juniper and some pinyon are found in most rough and inaccessible areas (see Table 2-23). Also, in over 50 percent of the sagebrush type, over 10 percent of the vegetation composition is juniper trees. Thus, over 400,000 acres of the resource area have pinyon-juniper trees which account for from 10 to nearly 100 percent of the vegetation composition, depending on the site.

**TABLE 2-33**
**Areas Containing Woodland Products**

| Area | Acres | Volume | |
|---|---|---|---|
| | | Fuelwood (cords) | Post (each) |
| Keg Mountain | 25,000 | 49,000 | 125,000 |
| Swasey Mountains | 23,000 | 82,000 | 20,000 |
| Fish Springs Range | 11,000 | 27,000 | 6,000 |
| Deep Creek Mountains | 17,000 | 53,000 | 11,000 |

[1] Other areas (Thomas, Confusion, and Middle ranges, Drum Mountains, etc.) also contain significant, though predominantly scattered, volumes of woodland resources; however, no inventory of those areas has yet been done.

The most significant pinyon-juniper resources are in eastern Juab County and northeastern Millard County. Crown closure is nearly 100 percent in some areas. A partial inventory of the area's woodland products in 1980 indicated that the volumes of woodland products present are: firewood, 384,000 cords; line posts, 4,456,000; and corner posts, 3,049,000. One area (about 1,345 acres) near Eureka has been a Christmas tree harvesting area for several decades. It is estimated that this area has the ability to sustain harvest of 500 pinyon pine Christmas trees per year indefinitely. The Tintic portion of the HRRA has supplied most of the woodland products to meet the limited demand in the resource area.

Other areas containing significant woodland products and the estimated volumes are found in Table 2-33. These woodland resources are also mostly in areas with steep slopes (greater than 40 percent. Most stands are scattered with stubby trees and crown densities as low as 10 percent. In some areas (such as on the north slopes of the Keg Mountains), however, juniper stands are thick and nearly unbroken. All of these areas are remote from population centers and have limited and/or poor accessibility. Therefore, there has been little or no demand for posts and fuelwood in these areas.

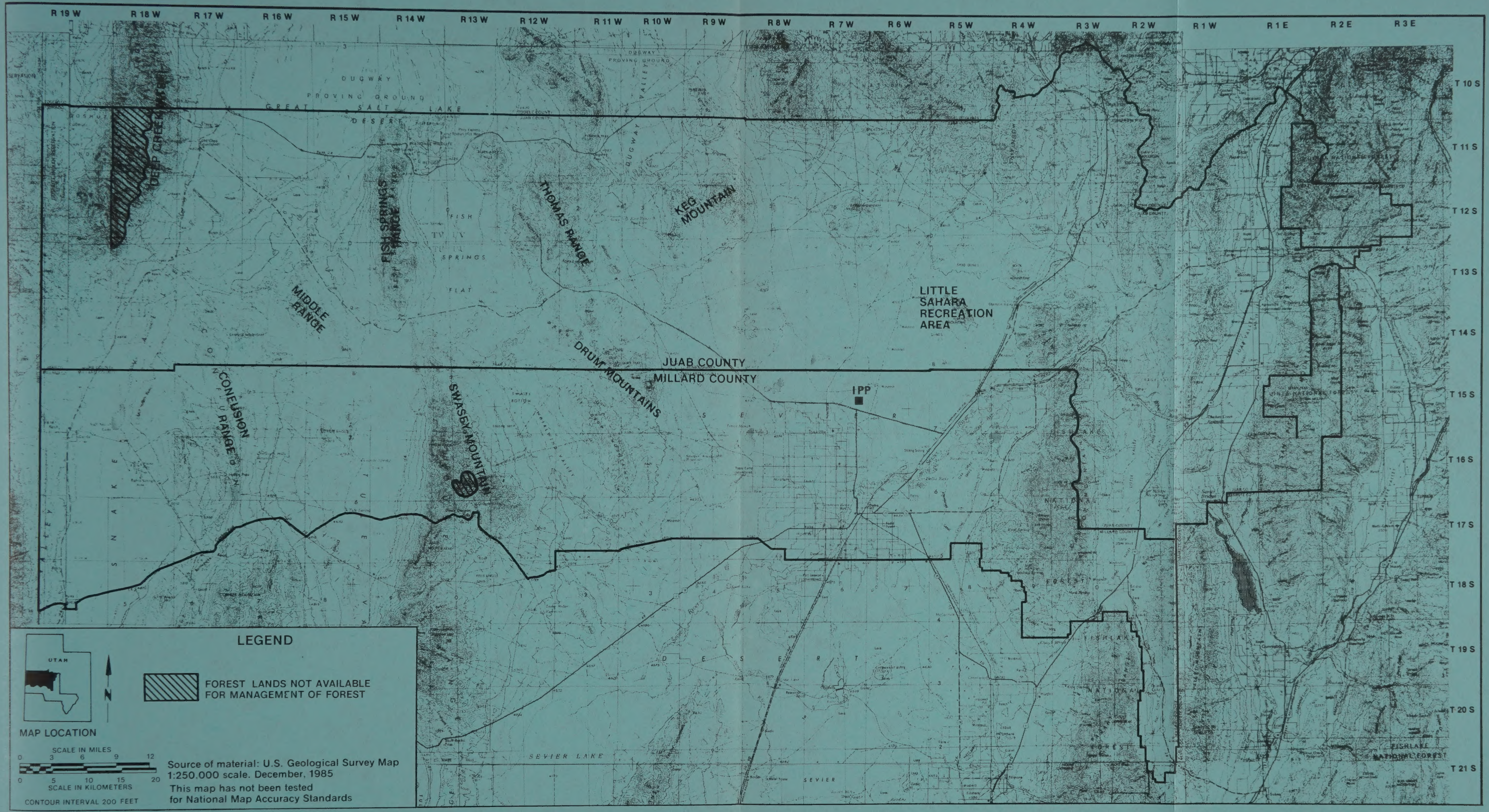
In the past, woodland products on steep slopes and at higher elevations were in protective management classifications to prevent damage to watersheds.

Sales of HRRA woodland resources has been on a demand basis. Three areas have had restrictions on harvest of woodland products: the Deep Creek Mountains, Little Sahara Recreation Area (including the Rockwell Natural Area), and Swasey Mountain. No harvest is allowed in the first two areas. In the Swasey Mountain, harvest is restricted to dead-or-down material. Woodland products in the remainder of the resource area are open to harvest.

In recent years since institution of the minimum $10 permit fee, the number of tree permits issued has decreased. Since 1983, permits issued have averaged 375 cords of firewood, 606 Christmas trees, and 2,450 posts annually. This does not, however, represent total demand, since it is estimated that in some areas trespass harvest has nearly equaled permitted harvest.

In view of the vast quantities of juniper resources, both on the HRRA and throughout Utah (9.3 million acres of pinyon-juniper), the supply is more than adequate to meet demand. The demand for pinyon is greater and may, in time, meet or exceed resource area production.

Many of the smaller trees of the lower elevations are dying. The cause of this is unknown.



Source of material: U.S. Geological Survey Map 1:250,000 scale. December, 1985
This map has not been tested for National Map Accuracy Standards

FIGURE 2- 23

FOREST RESOURCES

## Elements of the Plan

### GOALS AND OBJECTIVES

Manage woodland stands to supply woodland products on a sustained basis for fuelwood, posts, pinenuts, and Christmas trees at fair market value.

Authorize harvest of woodland products which approximates the biological capability of the stands to replace its harvested trees.

Increase the accessibility to and within the woodland stands to more fully utilize woodland stands.

## Proposed Plan

Timber harvest is planned in a way that is least disruptive to wildlife. Cutting areas, woodland sales, and vegetation treatments are designed to provide adequate security and cover for wildlife. Harvest activities may be restricted due to wet soil conditions.

Harvesting on slopes in excess of 40 percent will be restricted to minimize surface disturbance. No clearing is allowed within a 100-foot buffer strip on each side of live streams.

In addition, Christmas tree permits issued would be limited to estimated sustained yield capacity in accordance with FLPMA.

### SUPPORT NEEDS AND PROGRAM COORDINATION

Engineering support will be required for the design and construction of access. Fire management support would be needed for management of wild fire.

Program coordination with the range, wildlife, and watershed programs would be required in establishing green wood cutting areas, salvage areas, types of harvest methods, and planned results of harvest and mitigation requirements for the activity plan.

# FIRE MANAGEMENT

## Introduction

Current fire management practice directs a full suppression effort in lieu of a Fire Management Activity Plan. Controlled prescribed fires are used on a case-by-case basis to convert vegetation types for the benefit of wildlife, livestock, and watershed.

Historically, the west half of the resource area has had very few fires. The east half, however, experiences large fires yearly. July, August, and September often have multiple occurrences. The largest fire in recent history, the Little Oak fire, occurred in 1981 in the Dust Bowl, Blue Spring, and Red Butte allotments, exceeding some 17,000 acres. In 1984, the resource area experienced 21 fires, burning 10,676 acres.

## Elements of the Plan

### GOALS AND OBJECTIVES

To reduce losses, compliment resource management objectives, and sustain productivity of biological systems through fire management.

## Proposed Action

Areas will be identified for full suppression and limited suppression, as well as prescribed fire opportunities. Eighty-nine thousand acres have been identified for limited suppression in the Tintic Planning Unit. Prepare and implement a fire management activity plan on the entire resource area.

### SUPPORT NEEDS AND PROGRAM COORDINATION

Support will be required within all resource programs in the development of prescribed fire plans. Program coordination will be required with local fire departments, the State Fire Control Officer, and the U.S. Forest Service in implementing full and limited fire suppression. Prescribed burning will be required to comply with BLM Manual Section 7723, "Air Quality Maintenance Requirements."

# CHAPTER 3

# ADDITIONS AND CORRECTIONS TO THE DRAFT RESOURCE MANAGEMENT PLAN/ ENVIRONMENTAL IMPACT STATEMENT

Because this Resource Management Plan/Environmental Impact Statement (RMP/EIS) is using a short-form format, the following chapter of errata to the Draft RMP/EIS is included. Where the correction involves sections included in the Final RMP/EIS, those correction appear in the text, as well as being listed by page in this chapter.

## ERRATA SHEETS

### Page 14, Table 2-1

The entry on Alternative A should be followed by a sentence stating: "The current criteria for land disposals appears in Appendix 10."

The entry on Alternative B should be followed by the clause: "in accordance with FLPMA, Section 2, unless information not currently available indicates that disposal for certain uses may better serve the national interest."

### Page 21, Table 2-1

Alternative C, line 2 following mule deer, insert: "antelope, elk, and bighorn sheep."

Alternative C across from 2. Mule Deer. The entry "All noncompetitive forage would....allocated to livestock" is not a parallel entry and should be replaced with: "Same as Alternative A." This change would also occur on the next five entries in Alternative C.

### Page 23, Table 2-1

South Tule Spring should be deleted from the actions proposed in Riparian Habitat and Endangered Species/Sensitive.

### Page 24, Table 2-1

Under Soil/Watershed, the entry in Alternative A should be followed by action in each of the other alternatives saying: "Same as Alternative A."

The action in Alternative B does not have a parallel action in Alternative A.

### Page 26, Table 2-2

The table title should be "Right-of-Way Corridor Specifications" not "Right-of-way Specifications."

The entry "Width" should be "Corridor Width."

### Page 27, Figure 2-1

Add stippled pattern to map for M designation.

### Page 35

Five grazing allotments should be deleted from this table. They include Boyd Station, Cowboy Pass, Coyote Knolls, Devils Gate, and Tule Spring. Five other allotments should be added: Riverbed, Ferner Dog Valley, Gilson, Stone, and Summit. Corrections to big game use in these allotments caused this shift.

### Page 36

The table reference "Table 2-3" should be "Table 2-4."

### Page 45

Include chukar in the sentence: "Wildlife species found in the area include mule deer, antelope, elk, bighorn sheep, sage grouse, chukars, and raptors."

### Page 54

Remove *Townsendia aprica* from the table.

Other species were added to the table in the Final RMP/EIS.

### Page 57

Figure 2-3 should be: "Figure 2-2 are those allotments which have existing AMPs."

### Page 64

In the Antelope section following Table 3-6, a sentence should be added. It reads: "The quantity and quality of spring forage are factors that limit antelope abundance. Note that Figure 3-1 shows very little composition of key antelope spring forage."

The following sentence was changed to: "The only critical habitat areas are around the limited water sources."

### Page 69, Figure 3-7

Critical deer habitat areas were deleted at Maple Peak and Partoun areas (see revised map in Final RMP/EIS).

### Pages 71-75

Wildlife numbers were corrected, see Table 2-22 in the Final RMP/EIS.

### Page 76

Material has been added to indicate that: (1) peregrine falcon is also a endangered species; (2) blacktailed jackrabbits which inhabit sagebrush areas are a winter prey base for bald eagles; (3) Swasey Spring pocket gopher and an unknown dace are sensitive animals inhabiting the HRRA; (4) BLM does not have any additional data related to the gopher or dace; and (5) UDWR has an annual banding program for Swainson's and ferruginous hawks in the HRRA.

### Page 84, Table 3-8

South Tule Spring Complex was deleted from the table.

### Page 85

Add bighorn sheep to the sentence: "Mule deer, mountain lion, antelope, bighorn sheep, grouse, and chukar are among the major wildlife species found on the mountain range."

The following sentence should be completed by adding: "...mountaineering and camping are the most popular...."

Change "6,000 plant species growing in the Deep Creek Mountains" to "600 plant species."

### Page 86

"The Speleological Society of Utah" should be changed to "National Speleological Society."

### Page 87, Figure 3-11

The ORV designation for the Rockwell Natural Area should have been shown as closed, not restricted.

### Page 96

The "Permian Period" should be added to the table.

### Page 99

The word "current" should be added to the sentence: "The criteria for current land disposals are detailed in Appendix 10." The title of Appendix 10 should be "Current Land Disposal Criteria."

### Page 100

Delete "several" from the sentence related to stream in critical watershed in Maple Peak.

### Page 103

"43 CFR 3800" should be "43 CFR 3809."

"Fluorine" should be "Fluorite."

Forty-nine allotments having non-point source water pollution should be 43 allotments. Those allotments are identified in the Final RMP/EIS.

A table has been added listing 43 allotments having non-point source water pollution.

A table has been added listing 57 allotments containing ground water recharge areas.

### Page 109, Figure 3-15

Several words (soil titles) were misspelled in the Legend: Typtic should be Typic; Calixerolls should be Calcixerolls; Haplustolls should be Halustolls; and Tray should be Clay.

### Pages 125 and 126

These pages should be reversed.

## Page 134

In the analysis of Alternative A for antelope, the following sentence should be added to the first paragraph: "As the range converts from browse to grass, the range could become unusable for antelope because of the loss of key forage plants."

In the analysis of Alternative B for riparian/wetland habitat, leasing Category 2 should be changed to Category 3.

In the analysis for Alternative D in riparian/wetland habitat section, delete "Same as Alternative B." State: "As a result of the proposed action, riparian habitat is expected to improve under this alternative."

## Page 135

The unknown dace should be added to the least chub title paragraph.

The Swasey Mountain pocket gopher should be added to title.

The word "raptors" should be deleted from the sentence.

## Page 141, Figure 4-2

The ORV closure for the Rockwell Natural Area was incorrectly delineated. It should have covered 9,604 acres.

## Page 150

The sentence "However, 61 percent of the planning area would remain in Category 1." should have read 91 percent in Category 1 to correspond to Table 2-1.

## Page 151

The sentence stating that oil and gas categories would be the same as those in Alternative B should have said: "The percentage in each category is the same; however, several thousand acres more are categorized as Category 1."

The sentence "Twenty-one of these streams ....under section 208 of the Federal Water Pollution Control Act." should have said: "Twenty-one of these allotments have non-point source water pollutions...."

The last sentence on the page should begin, "Twenty-two of these allotments...."

## Page 193

The title of Appendix 10 should be "Current Criteria for Land Disposal." The criteria were not carried into the proposed plan.

# CHAPTER 4
# CONSULTATION/COORDINATION

## PUBLIC PARTICIPATION IN PREPARATION OF DRAFT ENVIRONMENTAL IMPACT STATEMENT

This document has been prepared by the House Range Resource Area (HRRA) and Richfield District Offices of the Bureau of Land Management (BLM). Initiation of the planning process in the HRRA, of which this Resource Management Plan/Environmental Impact Statement (RMP/EIS) is a part, took place on January 24, 1980, with the internal scoping of planning issues by BLM. A notice appeared in the *Federal Register* on February 22, 1980, announcing preparation of the RMP for the HRRA and inviting public input into the planning process.

The nine-step planning process, outlined in Chapter 1, requires public input throughout in order to adequately address the entire range of resource issues and concerns. All perspectives, from the public land user to the Federal land manager, have a voice. For those reasons, public participation in this planning effort has been ongoing since it was initiated in 1980.

Press releases and invitations were sent out in early February of 1980, providing the opportunity for public participation in the planning process through a workshop held in Nephi on February 26. At this workshop, public land users discussed resource problems and identified potential conflicts between uses. Comments were also solicited through newspaper articles, radio broadcasts, and personal letters. BLM analyzed the public comments and suggestions, in addition to available records of resource conditions, trends, needs, and problems. Based on significance, topics were selected to be addressed during the planning process.

From the Nephi workshop, a set of guidelines was prepared to (1) determine the information needed to deal with the problems; (2) collect the information; and (3) use the information to arrive at solutions and decisions. This set of planning guidelines was used to evaluate alternatives for management of the HRRA and to select a final RMP. These guidelines were published in a brochure and distributed to the public for comment in August of 1980.

Management review of the concerns discussed at the Nephi workshop identified only two concerns that met the criteria for planning issues: forage allocation and off-road vehicle (ORV) use. The remainder were identified and addressed as management concerns. These management concerns, though they do not meet the criteria for issues under BLM's planning guidance, are addressed in this RMP/EIS.

Considerable time was spent in data gathering and field inventory in order to prepare the Management Situation Analysis (MSA). Priority was given to collection of information to facilitate decisions relating to the planning issues and management concerns previously identified for the resource area. Data input was encouraged and solicited during the inventory phase to complete the data base that would be treated in the RMP. These contacts were largely informal and ongoing throughout the process.

A *Federal Register* notice appeared on May 1, 1985, outlining progress to date on the RMP process and calling for nominations of Areas of Critical Environmental Concern (ACEC) to be addressed in the EIS.

A newsletter was sent out to the public in July of 1985 providing an update on the RMP process. Livestock permittees were contacted shortly thereafter to complete the categorization of allotments. A second public newsletter followed in November of 1985 describing the four alternatives to be addressed in the RMP and allotment catgorization.

During preparation of the document, ongoing contact with the public has been maintained mostly through personal contacts and meetings with users. These contacts have served to continually refine the analysis and update the issues resolution process.

A meeting at Ivanpah was attended by Thomas Jensen, Larry Oldroyd, and Paul Sawyer to discuss BLM and the Goshute Indian Tribe activities and planning. The Indian Tribe is interested in planting elk or bighorn sheep on the reservation. They realized that such animals would also use public land in the Deep Creek Mountains. BLM allocation procedures were discussed. The Indians were told that BLM does not have unallocated elk forage at this time. But because bighorn now exist, the possibility of additional bighorn could be examined.

Consultation and coordination opportunities were provided to the following agencies having jurisdiction or expertise within the planning area during the public review period:

### Federal Agencies

- U.S. Department of Agriculture
  - Fishlake National Forest
  - Soil Conservation Service
- U.S. Department of Interior
  - Salt Lake District, Bureau of Land Management
  - Bureau of Indian Affairs
  - U.S. Fish and Wildlife Service
  - National Park Service
- Environmental Protection Agency
- Department of the Air Force

### State of Utah

- Clearinghouse
- Department of Natural Resources and Energy
- Division of Water Resources
  - Division of Wildlife Resources
  - Division of Lands and Forestry
  - Division of Environmental Health
  - Geological and Mineralogical Survey
  - Division of State History
  - Department of Community and Economic Development
  - Office of the State Planning Coordinator

### Local Governments

- Six County Association of Governments
- Juab County Commission
- Millard County Commission

### Indian Tribes

- Goshute Indian Tribe of Utah

## DISTRIBUTION OF THE DRAFT AND FINAL EISs

Copies of the Draft EIS were distributed to the following agencies, organizations, businesses, and interest groups. In addition, copies have been made available to individuals.

Copies of the Final EIS will be mailed to all who received the Draft EIS.

### Federal Agencies

- Department of Agriculture
  - Agricultural Stabilization and Conservation Service
  - Forest Service
    - Uintah National Forest
    - Wasatch National Forest
    - Fishlake National Forest
  - Soil Conservation Service
- Department of the Interior
  - Animal and Plant Health Inspection Service
  - Bureau of Indian Affairs
  - Geological Survey
  - Fish and Wildlife Service
  - Bureau of Mines
  - National Park Service
    - Lehman Caves National Monument
- Office of the Solicitor
- Department of Commerce
- Advisory Council on Historic Preservation
- Environmental Protection Agency

### Utah State Agencies

- Clearinghouse
- Department of Natural Resources
- Division of Water Resources
- Division of Wildlife Resources
- Division of Lands
- Division of Oil, Gas, and Mining

### Local Agencies

- Juab County Commission
- Millard County Commission

### Indian Tribes

- Goshute Indian Tribe
- Paiute Indian Tribe

### Nongovernment Organizations

Audubon Society
Cave Research Foundation
Common Cause
Council on Utah Resources
Defenders of the Outdoor Heritage
Defenders of Wildlife
Friends of the Earth
League of Woman Voters
National Council of Public Land Users
National Parks and Recreation Association
National Speleological Society
National Wildlife Federation
National Woolgrower's Association
Natural Resources Defense Council
Pro-Utah, Inc.
Public Lands Council
Rocky Mountain Oil and Gas Association
Sierra Club
Society for Range Management
Source
The Nature Conservancy
The Wilderness Society
The Wildlife Society
Utah Cattlemen's Association
Utah Council, Trout Unlimited
Utah Farm Bureau
Utah Sportsmen Association
Utah Archaeological Society
Utah Gem and Mineral Society
Utah Water Pollution Control Association
Utah Wilderness Association
Utah Wildlife and Outdoor Recreation Federation
Utah Woolgrower's Association

### Congressional

Utah Delegation

### Interested/Affected Individuals

Permittees
Private Landowners

## PUBLIC COMMENTS ON THE DRAFT EIS

### Open House

The following individuals attended the open house: Gary Macfarlane, Peter Hovingh, Steve Gillmore, Duane Green, Boyd Stansfield, and Delrease Kay.

No direct comments on the adequacy of the draft were received at the open house. However, questions on the intent of several statements, some suggestions for clarification, and some suggestions to add detail to the plan were received. The following notes were taken:

- The western spotted frog should be added to the discussions of riparian habitat valuable for least chub. The Gandy Salt Marsh, Willow, and Coyote springs are all good habitat for that species and are the southern end of its range in Utah. Possibly, a Research Natural Area for some of the habitat would be appropriate for the areas involved. Some fencing of the important riparian should be tried to evaluate the effect on the chub and frog. ORV use could also become a problem to these important habitats if such use increased.
- The Land Exchange in the Deep Creek Mountains should be completed to increase the manageability of the proposed wilderness area and to protect the unique habitat of those mountains.
- It does not appear that elk are native to the Deep Creek Mountains. There are questions about possible forage and habitat competition should they be introduced. Mountain bighorn sheep have been reintroduced and crucial winter range for them could be that which elk would prefer.
- Elk in the Tintic Mountain area are presently increasing and are of concern to ranchers and stockmen of the area. Their feelings are partially expressed in Comment Letters 10 and 11. Of great concern is the expected increased competition for forage and the increased cost of fence maintenance from destruction caused by elk.

Individuals felt that the potential exists to increase forage through revegetation and that could offset some forage competition, but those attending felt that the permittees should not be responsible to maintain fences beyond normal repair.

Thirty-one comment letters were received during the comment period for the draft RMP/EIS. Commentors are listed below:

| Letter Number | Name |
|---|---|
| 1 | Gerald J. Dalton |
| 2 | Mike and Sandra Sprunger |
| 3 | Gerald J. Dalton |
| 4 | Brush Wellman, Inc. |
| 5 | Utah State Historical Society |
| 6 | USDI, Fish and Wildlife Service |
| 7 | USDI, Office of Surface Mining |
| 8 | The Humane Society of Utah |
| 9 | John B. Halleck |
| 10 | Goshen Cattle Growers Association |
| 11 | West Tintic Cattle Association |
| 12 | Thousand Peaks Ranches, Inc. |
| 13 | Chevron USA, Inc. |
| 14 | Jerald and Marlene Bates |
| 15 | George C. Douglass |
| 16 | Department of the Air Force |
| 17 | Utah Nature Study Society |
| 18 | Intermountain Water Alliance |
| 19 | Salt Lake Grotto |
| 20 | The Nature Conservancy |
| 21 | Utah Wilderness Association |
| 22 | Rocky Mountain Oil & Gas Association, Inc. |
| 23 | Utah Wildlife Federation |
| 24 | Utah State Department of Health |
| 25 | Lance McCold |
| 26 | Jim Salman |
| 27 | Utah Wildlife Leadership |
| 28 | Environmental Protection Agency |
| 29 | USDI, Geological Survey |
| 30 | Utah State Governor |
| 31 | USDI, National Park Service |

Copies of the comment letters and responses to specific comments are located at the end of this chapter.

# PLANNING CONSISTENCY

All actions analyzed in this RMP/EIS are in compliance with the land use plans and controls of other agencies having jurisdiction in or near the planning area.

## Final EIS Availability

Copies of this Final RMP/EIS are available for public inspection at the BLM offices listed below:

Washington Office of Public Affairs
18th and C Street, N.W.
Washington, D.C. 20240

Utah State Office
324 South State
Salt Lake City, UT 84111-2303
Phone (801) 524-4227

Richfield District Office
150 East 900 North
Richfield, UT 84701
Phone (801) 896-8221

House Range Resource Area
P O Box 778
Fillmore, UT 84631
Phone (801) 743-6811

# GOVERNOR'S CONSISTENCY REVIEW

The Governor's response to the Draft EIS was received in Comment Letter 30. The Governor will be provided a 60-day period for review of the Final RMP/EIS.

# RECORD OF DECISION, PROTEST PROCEDURES

All parts of this proposed Plan may be protested. Protests should be sent to the BLM Director, Bureau of Land Management, 18th and C Streets, NW, Washington, D.C. 20240, prior to October 30, 1986, and should include the following information.

- The name, mailing address, telephone number, and interest of the person filing the protest.
- A statement of the issue or issues being protested.
- A statement of the part or parts being protested.
- A copy of all documents addressing the issue or issues that were submitted during the planning process by the protesting party or an indication of the date the issues were discussed for the record.
- A short concise statement explaining why the BLM State Director's decision is in error.

No sooner than the end of the 30-day protest period and after the Governer's Consistency Review, a record of decision will be issued. Approval shall be withheld on any portion of the plan under protest until final action has been completed on such protest.

March 12, 1986

Gerald J. Dalton
459 North 250 East
Kaysville, Utah 84037

Alan Partridge
Bureau of Land Management
Richfield District Office
150 East 900 North
Richfield, Utah 84701

Dear Mr. Partridge:

Thank you for the copy of the Draft Resource Management Plan Environmental Impact Statement For The House Range Resource Area.

1.1 In response to this document please find enclosed a copy of a letter recently sent to the addresses as shown.

Very truly yours,

Gerald J. Dalton

Gerald J. Dalton

---

March 10, 1986

Gerald J. Dalton
459 North 250 East
Kaysville, Utah 84037

Dr. Gregory Thayn
Bureau of Land Management
Utah State Office
Wilderness Studies (U-933)
324 South State Street
Salt Lake City, Utah 84111-2303

Dear Dr. Thayn:

This letter directs attention to the north end of the Swasey Mountain WSA (UT-050-061, BLM DEIS, Vol. II, 1985, 35 pp.) and more particularly its gold resource potential. Valid mining claims, some of which predate the WSA, are present in the north end of the Swasey Mountain WSA.

Through previous work on stratigraphy, structure, alteration and mineralization and a number of field trips to the nearby Drum gold mine, the most recent of which was on November 13, 1985, I find that the specific geologic characteristics of the north end of the Swasey Mountain WSA and the Drum gold mine are similar in almost all respects.

I have therefore, with reference to specific criteria adopted by the BLM to derive levels of favorability for gold resources, assigned the north end of the Swasey Mountain WSA a favorability rating of f4 as described on page 345 of the BLM DEIS, Vol. I, 1985.

In reference to geologic information presented to the BLM in meetings held in Richfield and Salt Lake City, Utah on June 3 and November 8, 1985 respectively, I note that the degree of certainty that a gold deposit does occur in the north end of the Swasey Mountain WSA is in category c3 or c4 of those specific criteria adopted by the BLM to derive levels of certainty for gold resources as described on page 345 of the DEIS, Vol. I, 1985.

These favorability and certainty ratings for a gold resource in the north end of the Swasey Mountain WSA demonstrate that the "Mineral and Energy Resource Rating Summary", Table 4, page 12 of DEIS Vol. II, is incomplete since it does not include gold as a resource. As a result the DEIS for the north end of the Swasey Mountain WSA is also incorrect. Inaccurate evaluations such as the following are noted. Page 1, under "Comment 3" ... The mineral potential is ranked none to low by Science Applications, Inc. (SAI, 1982). Page 20, under "Locatable Minerals" . .. However, the likelihood of development is thought to be minimal because economic considerations (e.g., transportation, low potential, etc.)(underscoring added). Page 23 under "Socioeconomics" ... However, the probability of economic development of minerals within the WSA is low ...(underscoring added). Examples from other paragraphs under the same or similar headings could be cited.

Because of the omission of gold as a resource in the north end of the Swasey Mountain WSA and the resultant inaccuracies in the DEIS, I invite BLM personnel to again review all of the extensive and specific geological information that was presented at the two meetings mentioned earlier. This information is readily available upon request. I also urge BLM personnel to make arrangements to accompany representatives of Freeport-McMoRan Gold Company on a field trip to the area to view the evidence supporting a favorability rating of f4 and a certainty rating of c3 or c4 for gold resources in the north end of the Swasey Mountain WSA. I would also encourage representatives of the BLM to arrange a field trip with Western States Minerals to the Drum gold mine in order to compare and further evaluate the gold resource potential of the north end of the Swasey Mountain WSA.

It is important to note that certainty category for gold occurrence c3 on page 345 of the DEIS, Vol. I, 1985, fails to recognize that many disseminated gold deposits in the Basin and Range physiographic province of western North America contain no visible gold. This is not a trivial distinction with regard to the north end of the Swasey Mountain WSA since as previously mentioned, the specific geologic characteristics of the Drum gold mine, which is a disseminated gold deposit, and the north end of the Swasey Mountain WSA are similar in almost all respects.

In reference to the criteria of favorability and certainty cited above and the specific geologic charateristics of the nearby Drum gold mine, the area of greatest exploration potential for a disseminated-type gold deposit lies in the central and most mountainous portion of the last three miles of the north end of the Swasey Mountain WSA and further north outside of the WSA towards the Sand Pass road.

In order to preserve as much of the Swasey Mountain WSA as possible I would endorse the All Wilderness Alternative rather than the Partial Wilderness Alternative, providing that a revision in the WSA boundary were made which would exclude the last three miles of the north end of the Swasey Mountain WSA from WSA designation as shown on the enclosed All Wilderness Alternative map 2. This proposed action would infringe less on the Swasey Mountain WSA than the Partial Wilderness Alternative, while permitting the altered and mineralized area to be managed in accordance with the Topaz Planning Unit Management Framework Plan or the House Range Resource Area Resource Management Plan.

If this alternative is not suitable, I must endorse the No Action Alternative. This alternative will provide the accessibility so indispensable to the selective type of drilling required to test the subtle alteration and mineralization commonly associated with disseminated-type gold deposits. This alteration and mineralization signature is known to be widespread in the last three miles of the north end of the Swasey Mountain WSA.

Very truly yours,

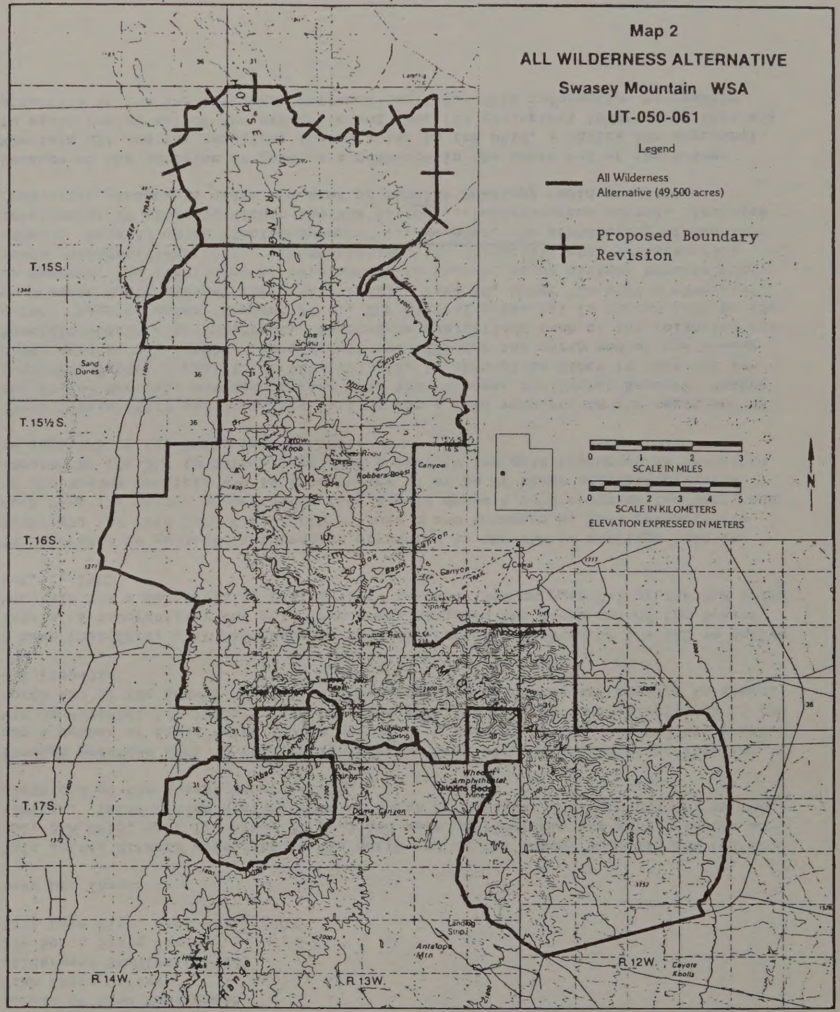
Gerald J. Dalton

Gerald J. Dalton

/gd

cc: Thomas Jensen, BLM Fillmore Office
Kenneth Puchlik, Freeport-McMoRan Gold Co.

SWASEY MOUNTAIN WSA



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## Response Letter 1

**1.1** Thank you for your comments regarding the Swasey Mountain Wilderness Study Area (WSA). As noted on Page 37 of the Draft Resource Management Plan/Environmental Impact Statement (RMP/EIS) for the House Range Resource Area (HRRA):

> "Alternatives for the management of WSAs (see Figure 2-4) in the HRRA were likewise considered but dropped. In Utah, a Statewide Wilderness EIS is being prepared to assess impacts of wilderness designation and to present recommendations as to whether each WSA is suitable or nonsuitable for wilderness designation. The RMP/EIS will, therefore, not discuss suitability recommendations. WSAs will continue to be managed under BLM Wilderness Interim Management Policy, until Congress makes a decision as to their designation. Any decision to designate wilderness in the HRRA would constitute a plan amendment."

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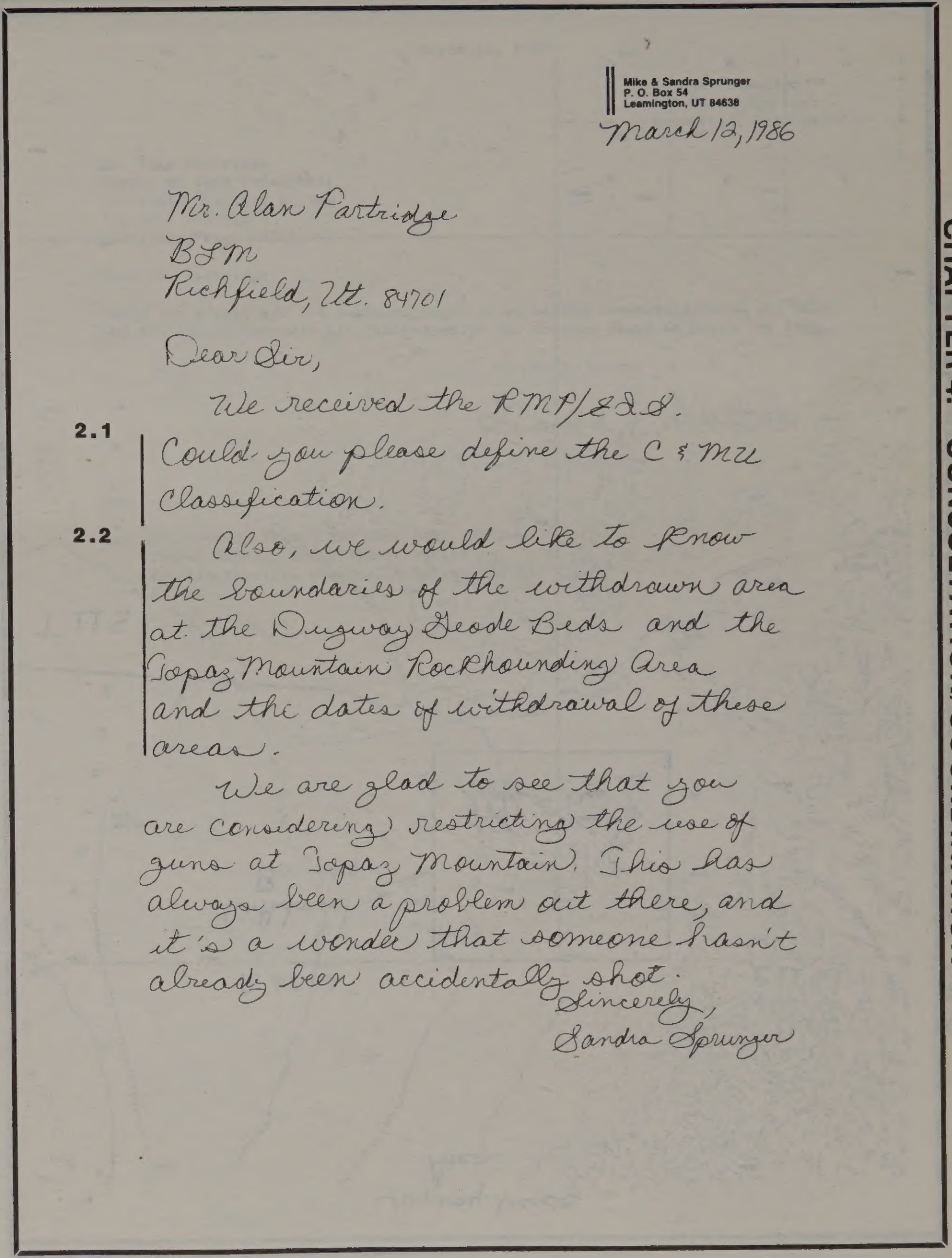
## Comment Letter 2



Mike & Sandra Sprunger
P. O. Box 54
Leamington, UT 84638

March 12, 1986

Mr. Alan Partridge
BLM
Richfield, Ut. 84701

Dear Sir,

We received the RMP/EIS.

**2.1** Could you please define the C & MU Classification.

**2.2** Also, we would like to know the boundaries of the withdrawn area at the Dugway Geode Beds and the Topaz Mountain Rockhounding Area and the dates of withdrawal of these areas.

We are glad to see that you are considering restricting the use of guns at Topaz Mountain. This has always been a problem out there, and it's a wonder that someone hasn't already been accidentally shot.

Sincerely,
Sandra Sprunger

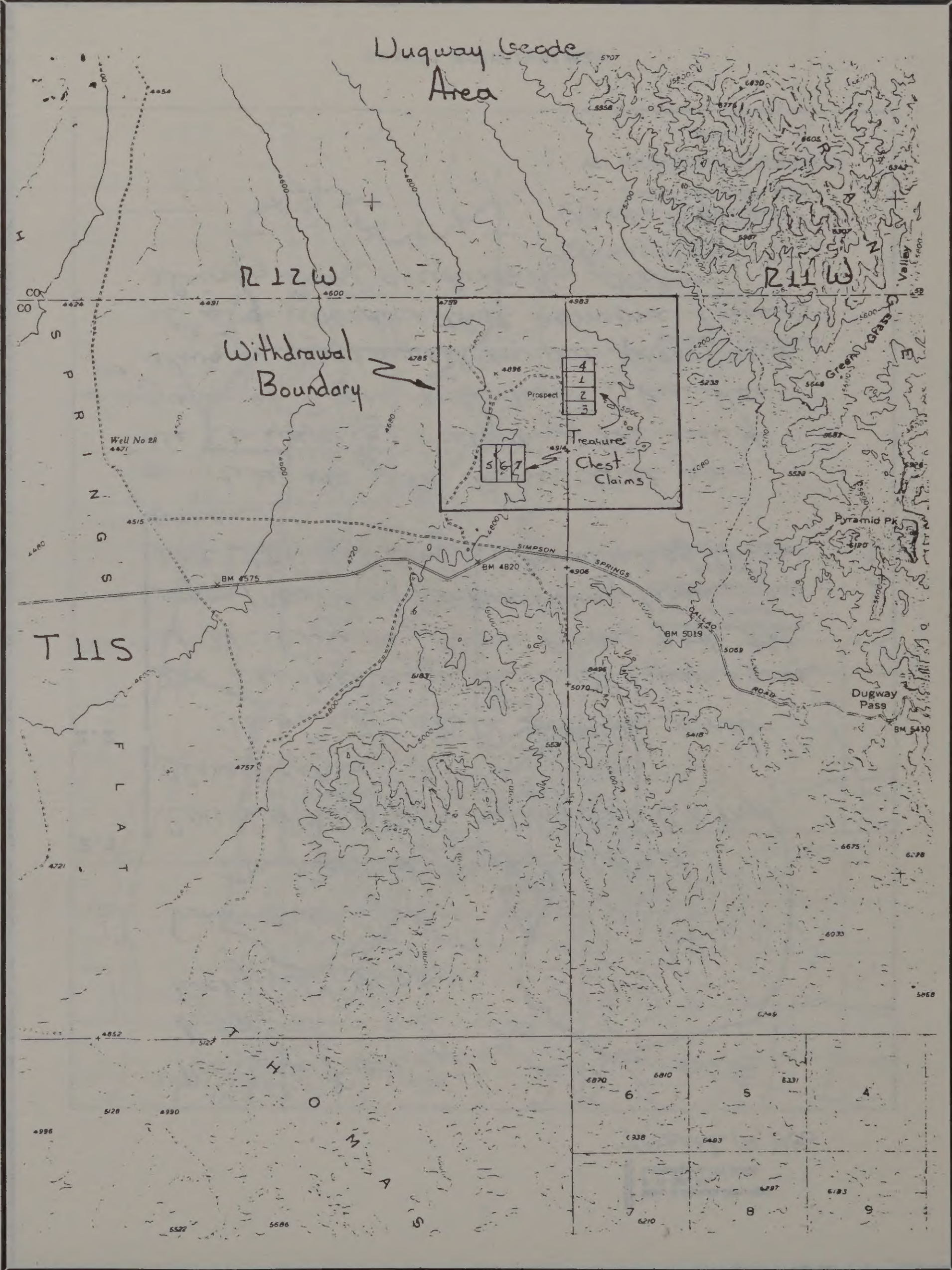
**2.1** The Classification and Multiple Use Act (C&MU Act) of September 19, 1964, gave the Secretary of Interior the authority to determine which public lands should be retained in Federal ownership and managed for any one or combination of public uses.

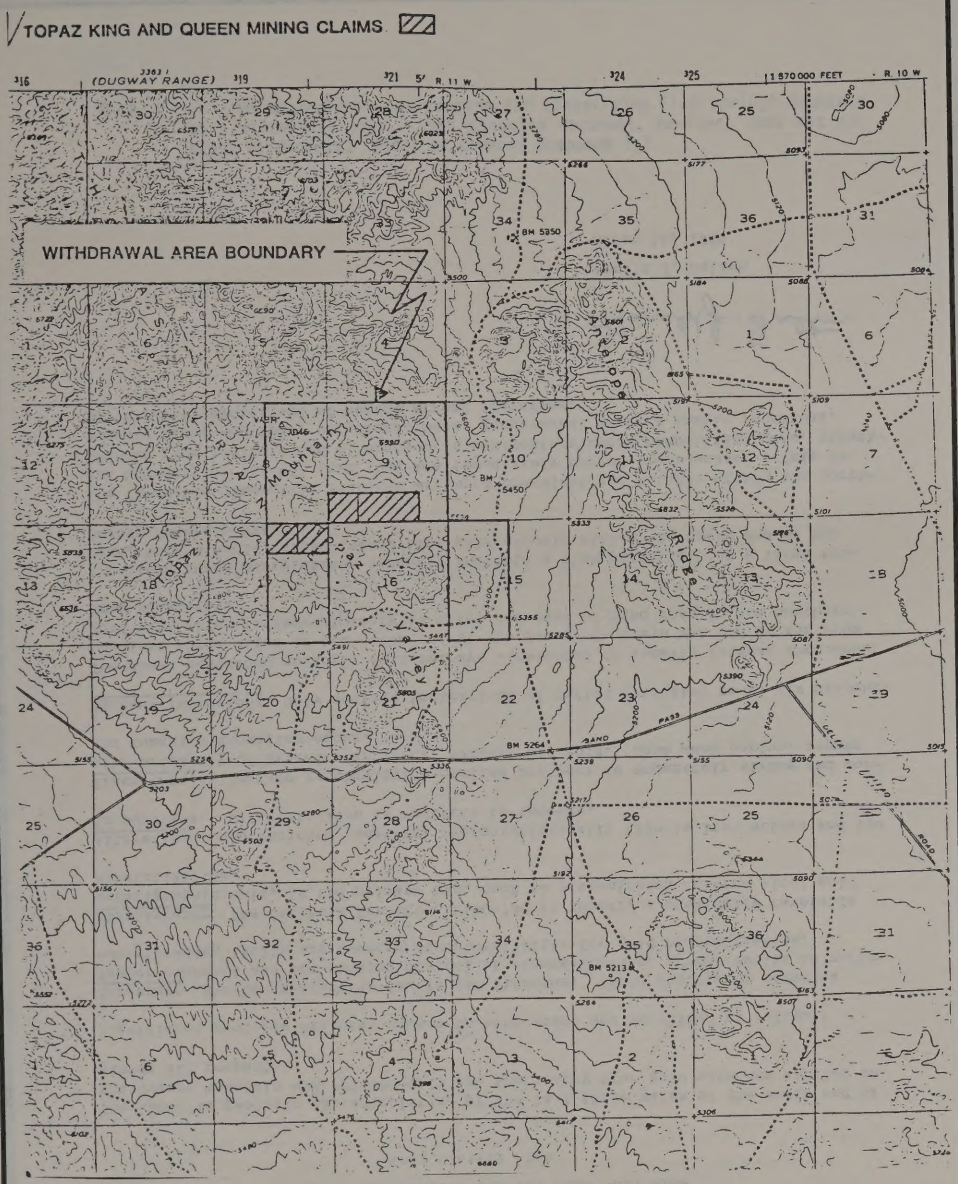
The Act authorizes that certain land may be segregated from various forms of disposal under other public land laws, in order to protect public values present in these lands. The C&MU Act classification on Topaz Mountain and the Dugway Geode Beds segregates these lands from entry and location under the mining laws. These lands were classified because the non-mineral uses of the lands were felt to be of greater importance to the public interest than the continued search for deposits of valuable minerals.

The regulations for land classifications under the C&MU Act are found in the Code of Federal Regulations 43 Part 2400.0-3 (j) Land Classifications; Part 2410, Criteria for All Land Classifications; and Part 2430, Criteria for Disposal Classification.

**2.2** On December 2, 1970, portions of Topaz Mountain were withdrawn from mineral entry by a modification to the BLM Multiple-Use Classification Order dated July 23, 1964. As a result, the area shown on the attached maps, constituting approximately 1,600 acres, is protected from mineral entry. The withdrawal did not, however, affect the standing of any claims in the withdrawal area at the time of the withdrawal.

The Dugway Geode Beds were also withdrawn on December 2, 1970. Some 2,273.5 acres were withdrawn from mineral entry or location.





March 14, 1986

Gerald J. Dalton
459 North 250 East
Kaysville, Utah 84037

Mr. Alan Partridge
Bureau of Land Management
Richfield District Office
150 East 900 North
Richfield, Utah 84701

Dear Mr. Partridge:

Would you please add the enclosed paper to my letter commenting about the DEIS and the Swasey Mountain WSA, addressed to Dr. Gregory Thayn on March 10, 1986.

Sincerely yours,

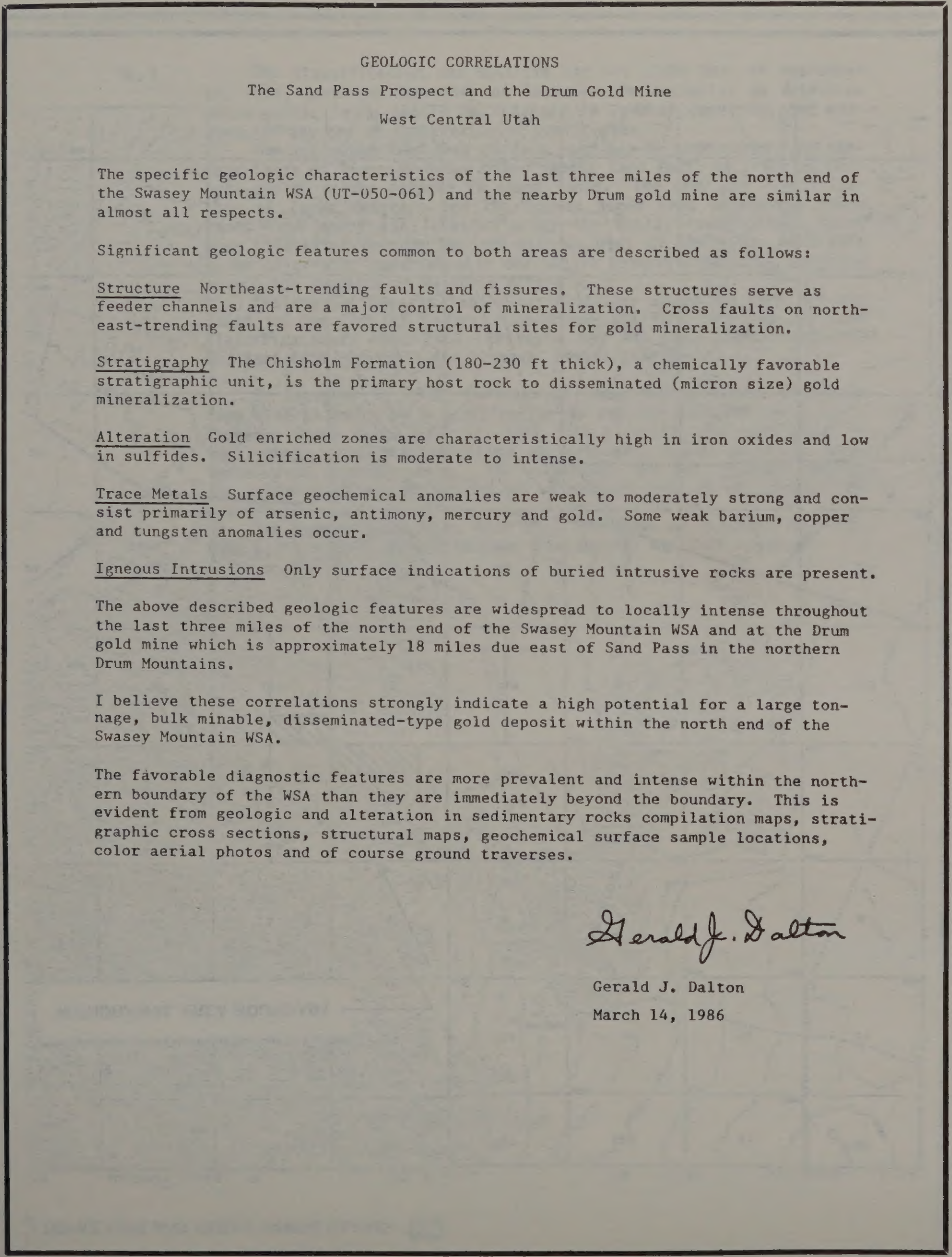
Gerald J. Dalton

Gerald J. Dalton

/gd

cc: Dr. Gregory Thayn, BLM Utah State Office
Thomas Jensen, BLM Fillmore Office
Kenneth Puchlik, Freeport-McMoRan Gold Co.

## Comment Letter 3



GEOLOGIC CORRELATIONS

The Sand Pass Prospect and the Drum Gold Mine

West Central Utah

The specific geologic characteristics of the last three miles of the north end of the Swasey Mountain WSA (UT-050-061) and the nearby Drum gold mine are similar in almost all respects.

Significant geologic features common to both areas are described as follows:

Structure Northeast-trending faults and fissures. These structures serve as feeder channels and are a major control of mineralization. Cross faults on northeast-trending faults are favored structural sites for gold mineralization.

Stratigraphy The Chisholm Formation (180-230 ft thick), a chemically favorable stratigraphic unit, is the primary host rock to disseminated (micron size) gold mineralization.

Alteration Gold enriched zones are characteristically high in iron oxides and low in sulfides. Silicification is moderate to intense.

Trace Metals Surface geochemical anomalies are weak to moderately strong and consist primarily of arsenic, antimony, mercury and gold. Some weak barium, copper and tungsten anomalies occur.

Igneous Intrusions Only surface indications of buried intrusive rocks are present.

The above described geologic features are widespread to locally intense throughout the last three miles of the north end of the Swasey Mountain WSA and at the Drum gold mine which is approximately 18 miles due east of Sand Pass in the northern Drum Mountains.

I believe these correlations strongly indicate a high potential for a large tonnage, bulk minable, disseminated-type gold deposit within the north end of the Swasey Mountain WSA.

The favorable diagnostic features are more prevalent and intense within the northern boundary of the WSA than they are immediately beyond the boundary. This is evident from geologic and alteration in sedimentary rocks compilation maps, stratigraphic cross sections, structural maps, geochemical surface sample locations, color aerial photos and of course ground traverses.

Gerald J. Dalton

Gerald J. Dalton
March 14, 1986

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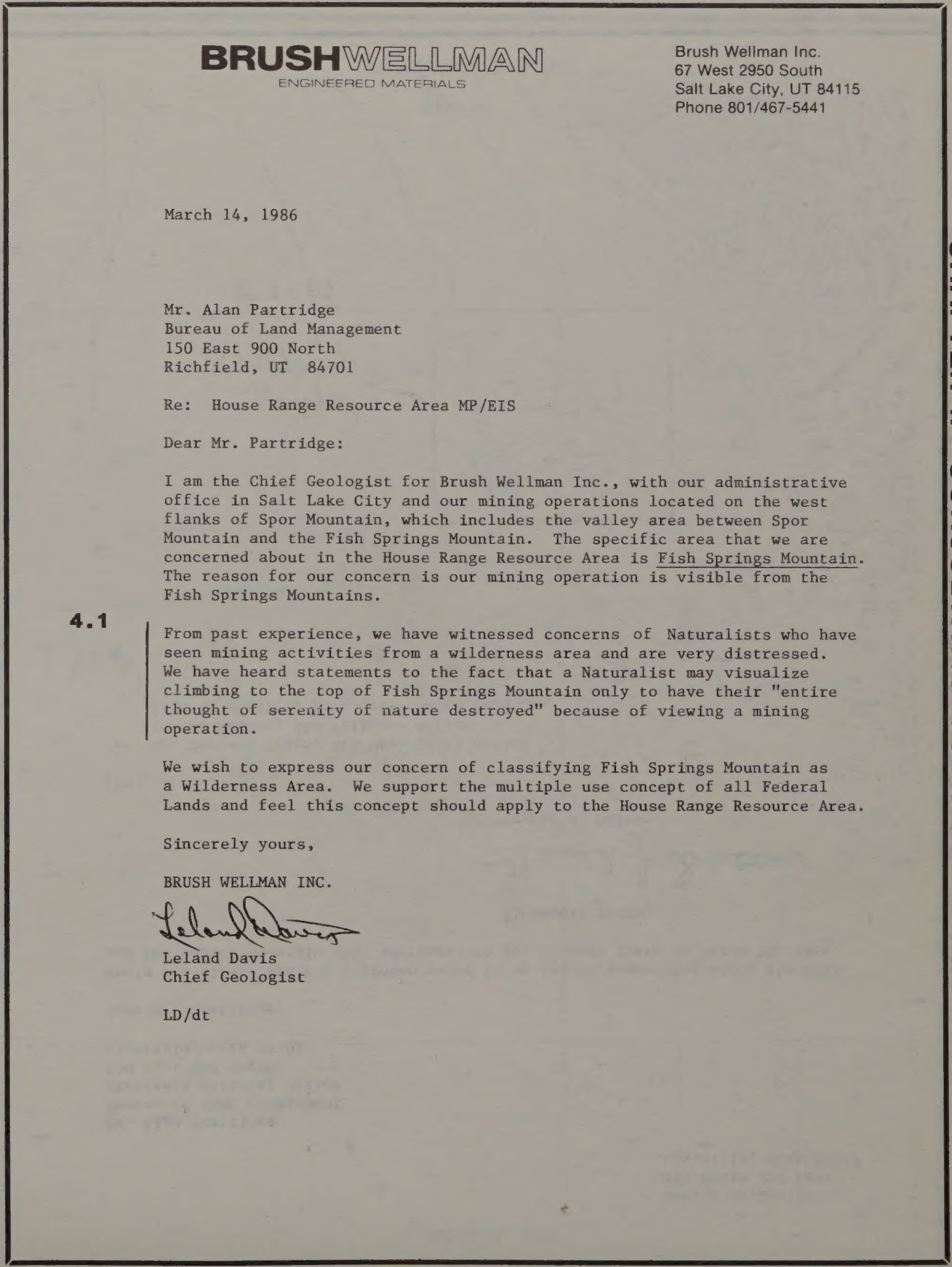
## Comment Letter 4



BRUSHWELLMAN
ENGINEERED MATERIALS

Brush Wellman Inc.
67 West 2950 South
Salt Lake City, UT 84115
Phone 801/467-5441

March 14, 1986

Mr. Alan Partridge
Bureau of Land Management
150 East 900 North
Richfield, UT 84701

Re: House Range Resource Area MP/EIS

Dear Mr. Partridge:

I am the Chief Geologist for Brush Wellman Inc., with our administrative office in Salt Lake City and our mining operations located on the west flanks of Spor Mountain, which includes the valley area between Spor Mountain and the Fish Springs Mountain. The specific area that we are concerned about in the House Range Resource Area is Fish Springs Mountain. The reason for our concern is our mining operation is visible from the Fish Springs Mountains.

4.1 From past experience, we have witnessed concerns of Naturalists who have seen mining activities from a wilderness area and are very distressed. We have heard statements to the fact that a Naturalist may visualize climbing to the top of Fish Springs Mountain only to have their "entire thought of serenity of nature destroyed" because of viewing a mining operation.

We wish to express our concern of classifying Fish Springs Mountain as a Wilderness Area. We support the multiple use concept of all Federal Lands and feel this concept should apply to the House Range Resource Area.

Sincerely yours,

BRUSH WELLMAN INC.

Leland Davis

Leland Davis
Chief Geologist

LD/dt

## Response Letter 4

**4.1** We appreciate your concern for classifying Fish Springs Mountain as a wilderness area. This planning document, however, does not address wilderness. Refer to Comment Response 1.1.

---

## Comment Letter 5

1896

NORMAN H. BANGERTER
GOVERNOR

STATE OF UTAH
DEPARTMENT OF COMMUNITY AND
ECONOMIC DEVELOPMENT

Division of
State History
(UTAH STATE HISTORICAL SOCIETY)

MELVIN T. SMITH, DIRECTOR
300 RIO GRANDE
SALT LAKE CITY, UTAH 84101-1182
TELEPHONE 801 / 533-5755

March 20, 1986

Mr. Alan Partridge
Bureau of Land Management
Richfield District Office
150 East 900 North
Richfield, Utah 84701

RE: 1792/4300 HR .002, Draft Resource Management Plan, Environmental Impact Statement for the House Range Resource Area

In Reply Please Refer to Case No. I777

Dear Mr. Partridge:

The Utah Preservation Office has received for its consideration the above referenced document. After review of the EIS, our office has the following comments for consideration.

On page 15, the BLM indicates that they will do the following:

1. Will evaluate for National Register potential the Pony Express route and stations, particularly at Fish Springs, Black Rock, Dugway and Boyd.
2. That the CCC camps will be evaluated for National Register interpretation and signing.
3. That the Joy Townsite will be or is recorded as a significant historic site, and that all identified cultural resource sites will be protected.

Considering regulations of the Bureau of Land Management and the National Historic Preservation Act, our office would concur with the BLM that this report meets all the necessary requirements concerning cultural resources. If we can be of any assistance, please let us know.

The above is provided on request as assistance as outlined by 36 CFR 800.5. We make no regulatory requirement concerning the 1966 Historic Preservation Act, since that responsibility rests with the federal agency official, in consultation with the Advisory Council on Historic Preservation. However, if you have questions or need additional assistance, please let us know. Contact Jim Dykman at 533–7039.

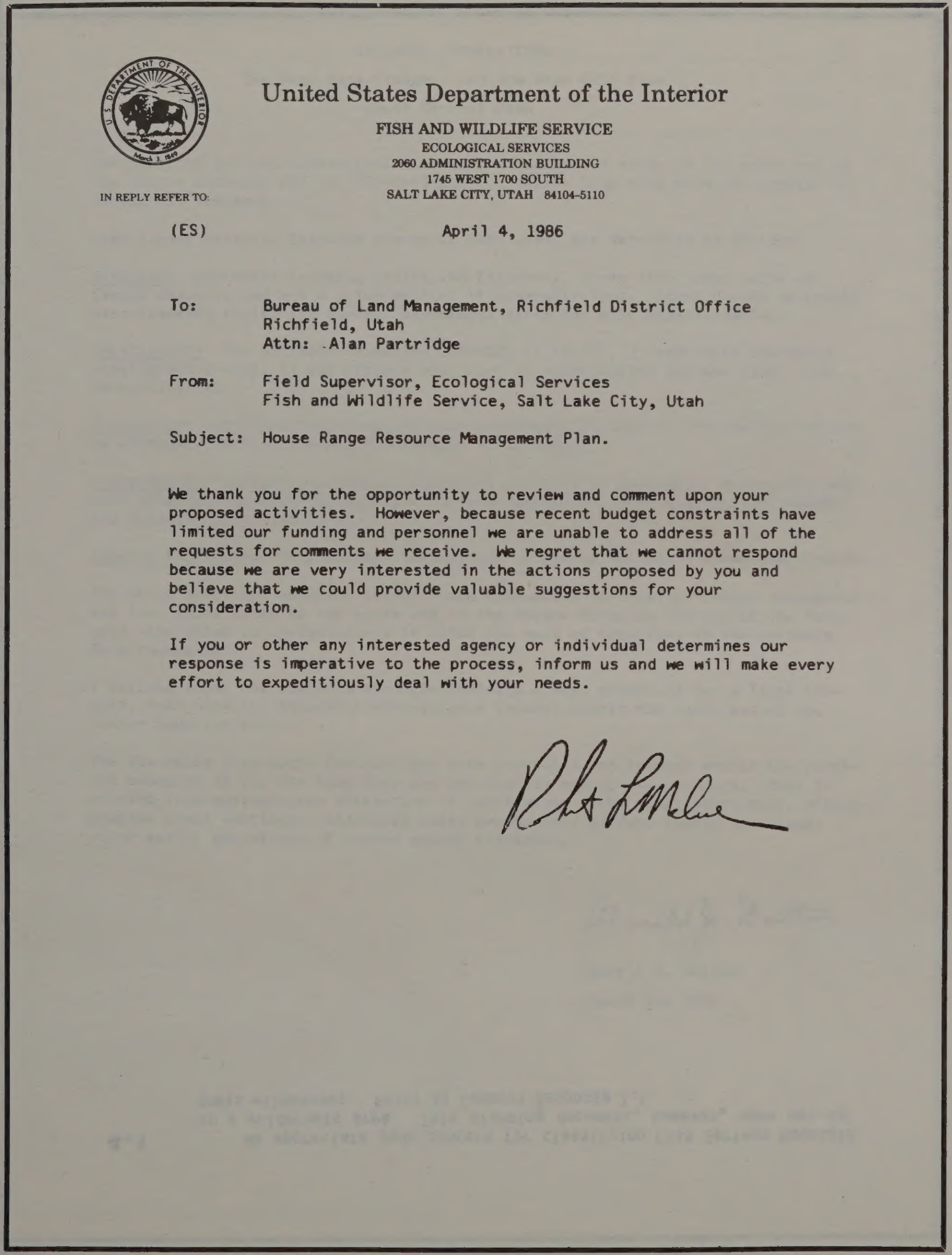
Sincerely,

Wilson G. Martin
Acting State Historic
Preservation Officer

JLD:jrc:I777/2747V

Board of State History: Thomas G. Alexander, Chairman • Leonard J. Arrington, Vice Chairman • Douglas D. Alder
Phillip A. Bullen • J. Eldon Dorman • Hugh C Garner • Dan E. Jones • Dean L. May • William D. Owens • Amy Allen Price

## Comment Letter 6



United States Department of the Interior
FISH AND WILDLIFE SERVICE
ECOLOGICAL SERVICES
2060 ADMINISTRATION BUILDING
1745 WEST 1700 SOUTH
SALT LAKE CITY, UTAH 84104-5110

IN REPLY REFER TO:
(ES)

April 4, 1986

To: Bureau of Land Management, Richfield District Office
Richfield, Utah
Attn: Alan Partridge

From: Field Supervisor, Ecological Services
Fish and Wildlife Service, Salt Lake City, Utah

Subject: House Range Resource Management Plan.

We thank you for the opportunity to review and comment upon your proposed activities. However, because recent budget constraints have limited our funding and personnel we are unable to address all of the requests for comments we receive. We regret that we cannot respond because we are very interested in the actions proposed by you and believe that we could provide valuable suggestions for your consideration.

If you or other any interested agency or individual determines our response is imperative to the process, inform us and we will make every effort to expeditiously deal with your needs.

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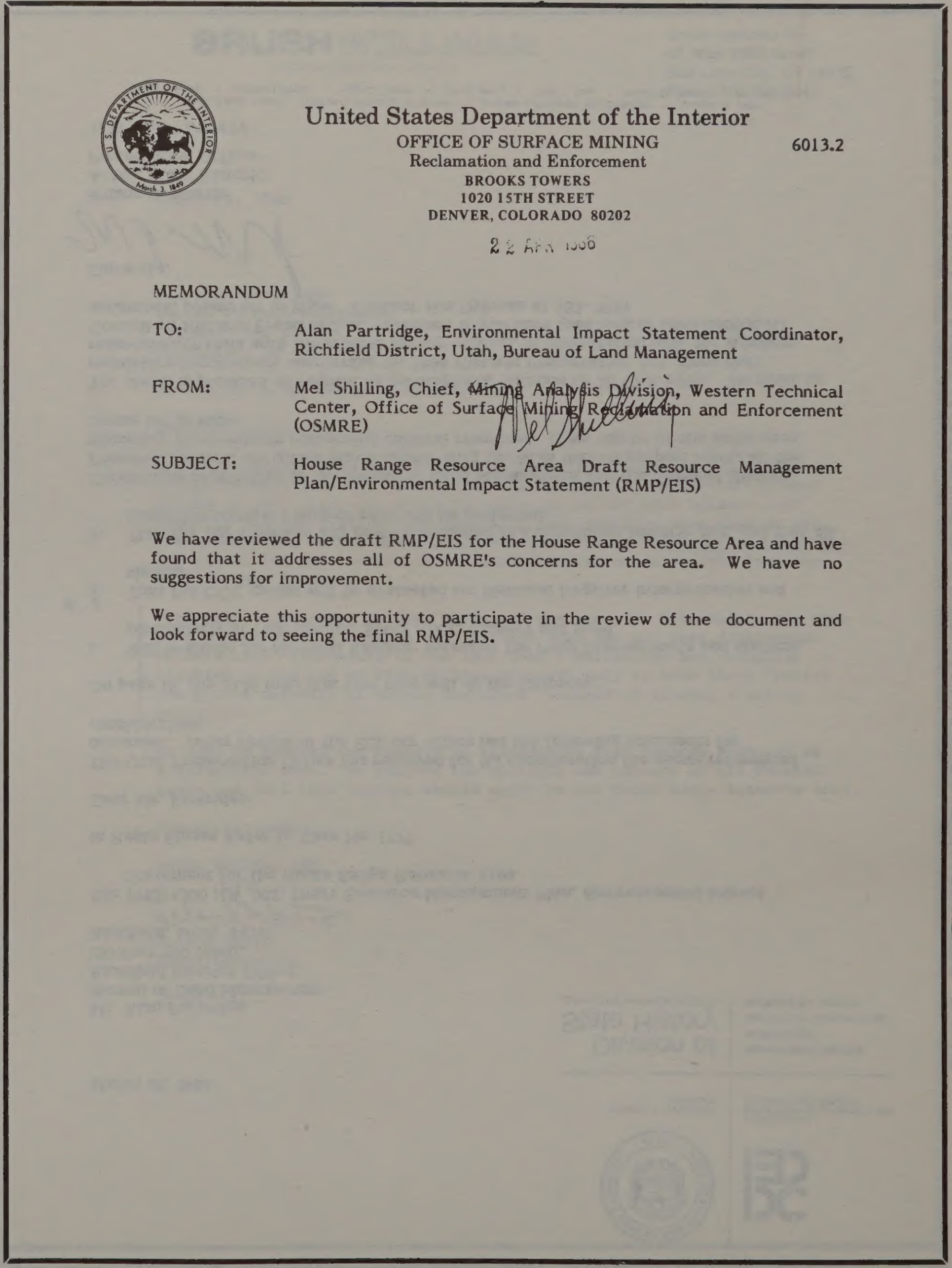
## Comment Letter 7



United States Department of the Interior
OFFICE OF SURFACE MINING
Reclamation and Enforcement
BROOKS TOWERS
1020 15TH STREET
DENVER, COLORADO 80202

6013.2

22 APR 1986

MEMORANDUM

TO: Alan Partridge, Environmental Impact Statement Coordinator, Richfield District, Utah, Bureau of Land Management

FROM: Mel Shilling, Chief, Mining Analysis Division, Western Technical Center, Office of Surface Mining Reclamation and Enforcement (OSMRE)

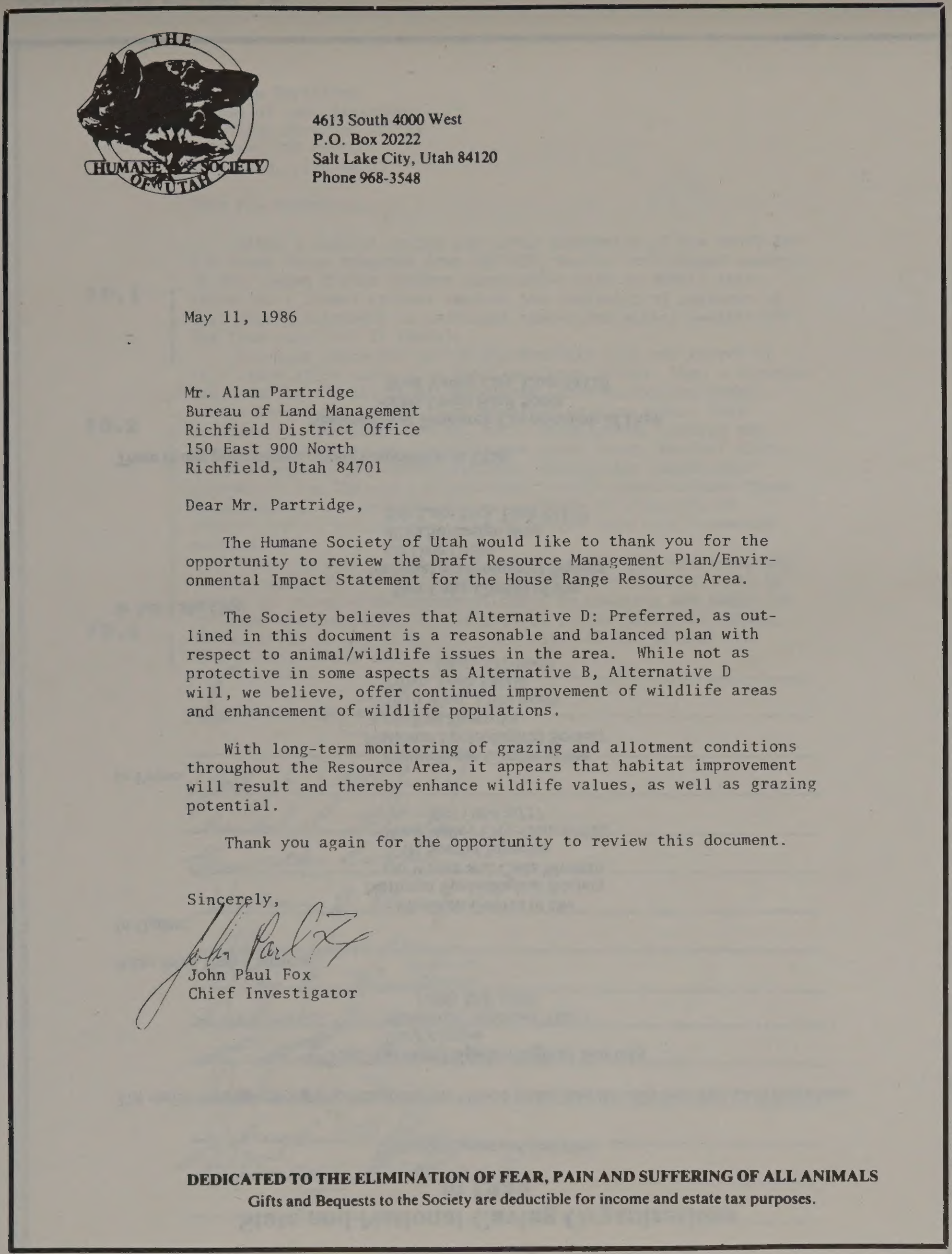
Mel Shilling

SUBJECT: House Range Resource Area Draft Resource Management Plan/Environmental Impact Statement (RMP/EIS)

We have reviewed the draft RMP/EIS for the House Range Resource Area and have found that it addresses all of OSMRE's concerns for the area. We have no suggestions for improvement.

We appreciate this opportunity to participate in the review of the document and look forward to seeing the final RMP/EIS.

## Comment Letter 8



THE HUMANE SOCIETY OF UTAH

4613 South 4000 West
P.O. Box 20222
Salt Lake City, Utah 84120
Phone 968-3548

May 11, 1986

Mr. Alan Partridge
Bureau of Land Management
Richfield District Office
150 East 900 North
Richfield, Utah 84701

Dear Mr. Partridge,

The Humane Society of Utah would like to thank you for the opportunity to review the Draft Resource Management Plan/Environmental Impact Statement for the House Range Resource Area.

The Society believes that Alternative D: Preferred, as outlined in this document is a reasonable and balanced plan with respect to animal/wildlife issues in the area. While not as protective in some aspects as Alternative B, Alternative D will, we believe, offer continued improvement of wildlife areas and enhancement of wildlife populations.

With long-term monitoring of grazing and allotment conditions throughout the Resource Area, it appears that habitat improvement will result and thereby enhance wildlife values, as well as grazing potential.

Thank you again for the opportunity to review this document.

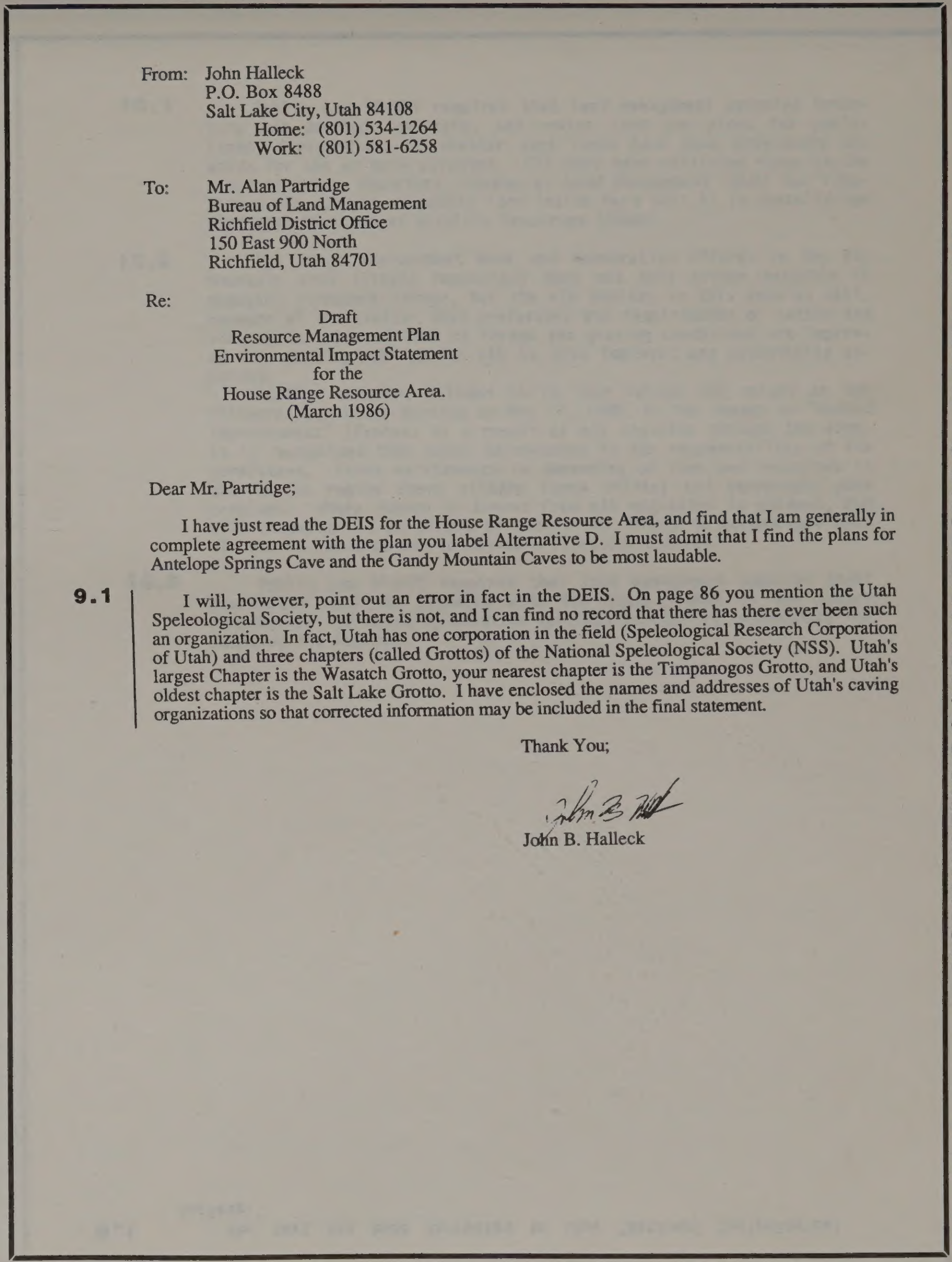
Sincerely,

John Paul Fox

John Paul Fox
Chief Investigator

**DEDICATED TO THE ELIMINATION OF FEAR, PAIN AND SUFFERING OF ALL ANIMALS**
Gifts and Bequests to the Society are deductible for income and estate tax purposes.

## Comment Letter 9



From: John Halleck
P.O. Box 8488
Salt Lake City, Utah 84108
Home: (801) 534-1264
Work: (801) 581-6258

To: Mr. Alan Partridge
Bureau of Land Management
Richfield District Office
150 East 900 North
Richfield, Utah 84701

Re:
Draft
Resource Management Plan
Environmental Impact Statement
for the
House Range Resource Area.
(March 1986)

Dear Mr. Partridge;

I have just read the DEIS for the House Range Resource Area, and find that I am generally in complete agreement with the plan you label Alternative D. I must admit that I find the plans for Antelope Springs Cave and the Gandy Mountain Caves to be most laudable.

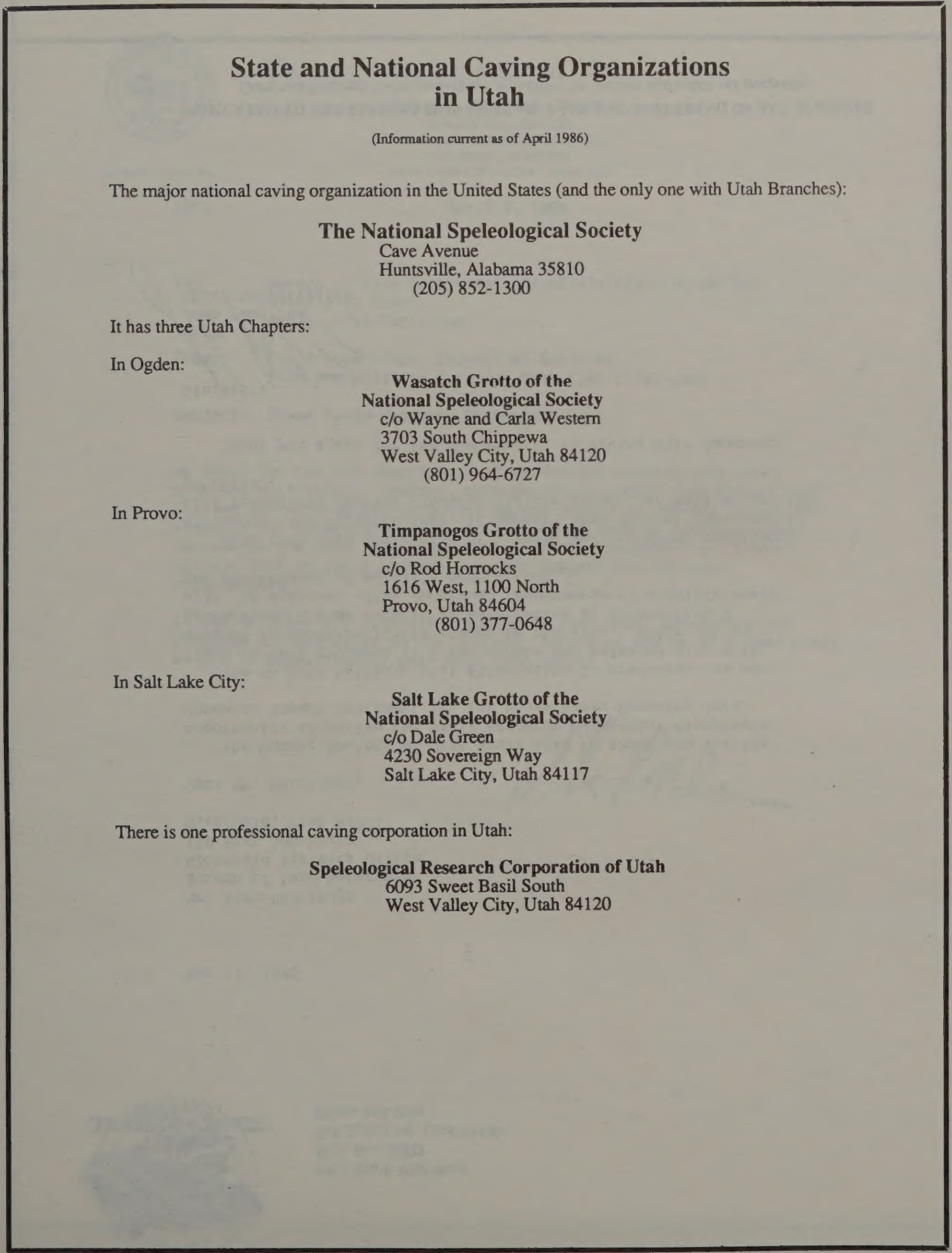
**9.1** I will, however, point out an error in fact in the DEIS. On page 86 you mention the Utah Speleological Society, but there is not, and I can find no record that there has there ever been such an organization. In fact, Utah has one corporation in the field (Speleological Research Corporation of Utah) and three chapters (called Grottos) of the National Speleological Society (NSS). Utah's largest Chapter is the Wasatch Grotto, your nearest chapter is the Timpanogos Grotto, and Utah's oldest chapter is the Salt Lake Grotto. I have enclosed the names and addresses of Utah's caving organizations so that corrected information may be included in the final statement.

Thank You;

John B. Halleck

John B. Halleck

## Comment Letter 9



### State and National Caving Organizations in Utah

(Information current as of April 1986)

The major national caving organization in the United States (and the only one with Utah Branches):

**The National Speleological Society**
Cave Avenue
Huntsville, Alabama 35810
(205) 852-1300

It has three Utah Chapters:

In Ogden:

**Wasatch Grotto of the**
**National Speleological Society**
c/o Wayne and Carla Western
3703 South Chippewa
West Valley City, Utah 84120
(801) 964-6727

In Provo:

**Timpanogos Grotto of the**
**National Speleological Society**
c/o Rod Horrocks
1616 West, 1100 North
Provo, Utah 84604
(801) 377-0648

In Salt Lake City:

**Salt Lake Grotto of the**
**National Speleological Society**
c/o Dale Green
4230 Sovereign Way
Salt Lake City, Utah 84117

There is one professional caving corporation in Utah:

**Speleological Research Corporation of Utah**
6093 Sweet Basil South
West Valley City, Utah 84120

## Response Letter 9

**9.1** The text has been corrected to show "National Speleological Society."

## Comment Letter 10

Mr. Alan Partridge
Bureau of Land Management
Richfield District Office
150 East 900 North
Richfield, Utah 84701

Dear Mr. Partridge,

After a careful review and group discussion of the draft for
the House Range resource Area RMP/EIS, we,the undersigned members
of the Goshen Cattle Growers Association wish to submit this
10.1 letter as a formal protest against the inclusion of portions of
our grazing allotment as permanent summer and winter habitat for
Elk from Herd Unit 11 (Nebo).

For many years the entire Big Mountain Area was shared by
this association along with Nephi and Mona groups. Then a division
was made with Nephi, Mona, Okelberrys, West Tintic and Goshen
cattle Associations/were each given specific grazing areas. This
10.2 resulted in extensive fencing, water development, seeding and
general maintaining of the different allocations. Most of these
range improvements were accomplished through the cooperative
efforts of the BLM and the individual cattle associations. These
improvements have required the expenditure of thousands of
dollars and an unknown number of man hours from both concerned
parties.

Since we have a vested interest in and a good understanding
of the potential for this area of our state we feel it would be
unwise to increase the number of AUM's to create a new range for
Elk from the Nebo unit. Furthermore it is our desire to retain
10.3 jurisdiction of our allotment along with the BLM without the
intrusion of other state agencies.

John J Stanfield
Randal S. Steele
Kenneth Cook
William B. Stansfield
Glen Jensen
Max D. Horton
Delwin Jensen
R. Reid Nelson
Dalreese Kay
Henry B. Cook

## Response Letter 10

**10.1** Public Law 94-579 requires that land management agencies inventory and develop, maintain, and revise land use plans for public lands, irregardless of whether such lands have been previously set aside for one or more purposes. Elk have been utilizing range in the resource area; therefore, Bureau of Land Management (BLM) has identified elk habitat on public land inside Herd Unit 11 in consultation with Utah Division of Wildlife Resources (UDWR).

**10.2** The range improvement work and cooperative efforts in the Big Mountain area (Tintic Mountains) have not only proven valuable in managing livestock forage, but the elk habitat in this area as well. Because of the similar diet preference and requirements of cattle and elk, it is expected that as forage and grazing conditions are improved for cattle, habitat for elk is also improved and potentially expanded.

Another concern, alluded to in your letter and voiced at the Fillmore open house meeting on May 12, 1986, is the damage to "vested improvements" (fences) as a result of elk crossing through the area. It is recognized that fence maintenance is the responsibility of the permittees. Fence maintenance is demanding of time and resources in the Tintic region where climate (snow drifts) and topography pose problems. Where damage to fences from elk migration is evident, BLM will cooperate in an effort to modify the fences to accommodate both elk use in the area and to maintain livestock control.

**10.3** Public Law 94-579 requires that land management agencies shall coordinate land use planning with the State. UDWR is the agency responsible for managing wildlife species, and BLM is responsible for managing the habitat.

## Comment Letter 11

Mr. Alan Partridge
Bureau of Land Management
Richfield District Office
150 East 900 North
Richfield, Utah 84701

Dear Mr, Partridge,

After a careful review and group discussion of the draft for
the House Range Resource Area RMP/EIS , we, the undersigned members
**11.1** of the West Tintic (Maple Peak) Cattle Association wish to submit
this letter as a formal protest against the inclusion of portions
of our grazing allotment as permanent summer and winter habitat
for Elk from Herd Unit 11 (Nebo).
For many years the entire Big Mountain Area was shared by
this association along with Nephi and Mona groups, Then a division
was made with Nephi, Mona, Okelberrys, West Tintic and Goshen
**11.2** Cattle Associations were each given specific grazing areas. This
resulted in extensive fencing, water development, seeding and
general maintaining of the different allocations. Most of these
range improvements were accomplished through the cooperative
efforts of the BLM and the individual cattle associations. These
improvements have required the expenditure of thousands of
dollars and an unknown number of man hours from both concerned
parties.
Since we have a vested interest in and a good understanding
of the potential for this area of our state we feel it would be
unwise to increase the number of AUM's to create a new range for
**11.3** Elk from the Nebo Unit. Furthermore it is our desire to retain
jurisdiction of our allotment along with the BLM without the
intrusion of other state agencies.

William R. Jasperson
Delvin Jensen
Howard Morgan
Delreeze Kay
Bethel [illegible] by Duane Jensen

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## Response Letter 11

**11.1** Refer to Comment Response 10.1.

**11.2** Refer to Comment Response 10.2.

**11.3** Refer to Comment Response 10.3.

## Comment Letter 12

THOUSAND PEAKS
RANCHES, INC.
SALT LAKE CITY, UTAH 84101
255 West 800 So.

March 27, 1986

Mr. Alan Partridge
Bureau of Land Management
Richfield District Office
150 East 900 North
Richfield, Utah 84701

RE: House Range EIS

Dear Sirs:

We would like to respond to the House Range EIS. We appreciate
all the work that went into this very extensive document. We agree
with the study in most areas. We are a large livestock operator in this
range so we would naturally feel that livestock are one of the most
12.1 important areas that should be addressed. We feel that it was well
stated but we are concerned with the competition with added wild horses
and other wildlife that may not have some type of control. Predator
12.2 animals are still high on our list of problems and we feel that the
Government trappers need to have free access to all areas to stop the
animal damage that takes place.
12.3 We feel that the BLM really did their homework and have an excellent
book. There are a few mistakes that we did notice. 1: Page 181, the
Partoun Allotment should have sheep from 11-2 to 4-26. 2: Page 183, the
Thousand Peaks allotment should have AUMs for cattle.

Thank you for the opportunity to respond.

Sincerely,

Lorin L. Moench, Jr.
Thousand Peaks Ranches, Inc.

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## Response Letter 12

**12.1** The control of wild horses is an important management objective. If these numbers are not controlled, they can increase to the extent that basic range (vegetation) resources are destroyed. Presently, laws and programs are effective in providing adequate control. The same is true with wildlife (deer and antelope), except that the Board of Big Game Control has responsibility for control of the numbers. BLM and UDWR make recommendations to that Board.

**12.2** BLM has coordinated the control efforts with State of Utah, FWS, and the individual operators. When damage can be shown, BLM has permitted trappers to control the problem.

**12.3** The corrections to the Partoun and the Thousand Peaks allotments have been added as shown in the Appendix 8.

Chevron
**Chevron** U.S.A. Inc.
700 South Colorado Blvd., P. O. Box 599, Denver, CO 80201

M. M. (Lisa) Flesche
Staff Analyst
Legislative and Regulatory Affairs

May 30, 1986

House Range Resource Area
Draft EIS and LRMP

Mr. Alan Partridge
House Range Resource Area
Bureau of Land Management
150 East 900 North
Richfield, UT 84701

Dear Mr. Partridge:

Chevron U.S.A. Inc. has serious concerns with the draft EIS and LRMP for the House Range Resource Area.

**13.1** First, we're concerned because the draft EIS does not follow the Fluid Mineral Leasing Guidelines provided in the Supplemental Resource Planning Guidance, a BLM planning requirement. These guidelines direct the BLM to assess the energy potential of the resource area in order to determine what trade-offs are essential. This information is supposed to be displayed in a matrix which identifies the resource area mineral potential and its relation to access restrictions.

**13.2** Second, since the draft EIS failed to discuss the mineral potential of the resource area, apparently decisions were made regarding the designation of special management areas without the benefit of geologic data. On page 151, your agency states that adjustments in existing oil and gas leasing categories were proposed in response to other recommendation to add further protection, maintain existing situations, **13.3** or ease restrictions. However, very few restrictions were eased, and there is no evidence of a trade-off analysis, but rather the needs of other resources seem to take priority without considering the issue of access for oil and gas activities. This contention is supported by the fact that under the preferred alternative there is a 38% drop in lands available for leasing with standard stipulations: under current management 99% of the resource area is available for leasing under standard stipulations; the preferred alternative would make only 61% of the area available for leasing uner standard stipulations.

**13.4** Third, we recommend that a map be included that indicates where the various leasing categories are applicable. With the exception of areas proposed for withdrawal, the public has no reasonable way in which to determine those areas subject to standard, seasonal, or no surface occupancy stipulations.

**13.5** Fourth, on page 13 the draft EIS states "Those lands, resources, and programs not affected by the resolution of any issue would be managed

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**13.5 cont.** as they are at present." However, significant changes have been proposed in the draft EIS regarding the availability of lands for exploration and production of mineral resources. There is virtually no discussion of possible impacts which could result from energy and mineral activities and associated mitigation measures which would be applied in sensitive areas to minimize impacts. These changes are not justified because they were not fully analyzed in accordance with planning regulations and requirements.

In conclusion, Chevron cannot support your preferred alternative because we do not believe that oil and gas were given adequate consideration during the planning process, even though most of the resource area is under oil and gas lease, and even though your guidelines specifically require you to conduct a trade-off analysis for your minerals (with regard to lost opportunities for oil and gas activities). Therefore, Chevron supports the no action alternative at this time.

Sincerely yours,

Lisa Flesche

MMF:da

## Response Letter 13

**13.1** The oil and gas potential has been added to the Introduction of the Minerals section of Chapter 2 of this Final RMP/EIS. The oil and gas potential ranges from speculative to very low (see Table 2-28 of this Final RMP/EIS).

**13.2** The only area proposed for mineral withdrawal or limited mineral development are those areas proposed for special management designation (see Table 2-28 of this Final RMP/EIS and Figure 2-3 of the Draft RMP/EIS). These areas would have more stringent protection than now exists.

**13.3** The 61 percent found on Page 150 of the Draft RMP/EIS has been revised to read: "91 percent of the HRRA is in Category 1." See Page 15 of the Draft RMP/EIS for actual figures. Most of the trade-offs considered in the proposed withdrawal from mineral entry are required by laws which protect special features. Table 2-28 lists the site, acreage, mineral potential, and special features involved in each site proposed for mineral withdrawal.

**13.4** Figure 2-20 of this Final RMP/EIS shows the categories for oil, gas, and geothermal leasing.

**13.5** Refer to the Minerals section, Chapter 3 (pages 99-103), of the Draft RMP/EIS, for a discussion regarding the current situation of energy and mineral activities within the resource area. A minerals impact analysis, as a result of the alternatives considered, can be found in Chapter 4 of the Draft RMP/EIS.

The later development of site-specific activity plans will further define restrictions, if any, to energy and minerals activities.

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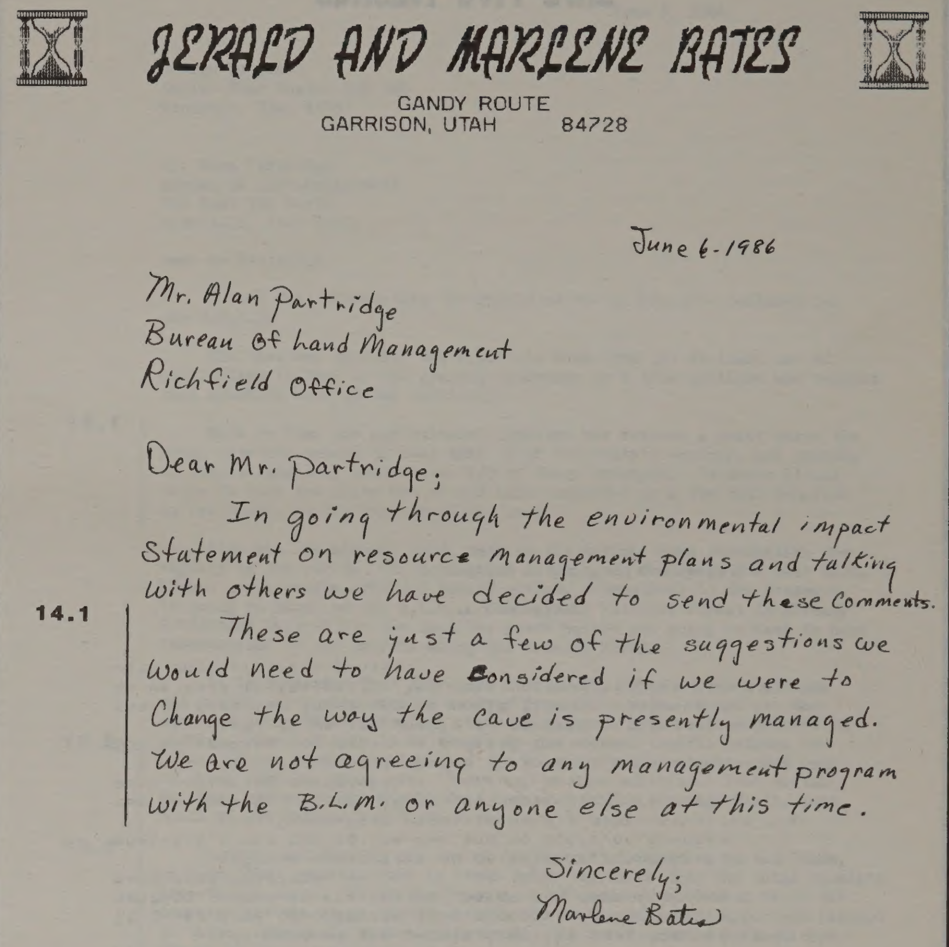
## Comment Letter 14



JERALD AND MARLENE BATES
GANDY ROUTE
GARRISON, UTAH 84728

June 6-1986

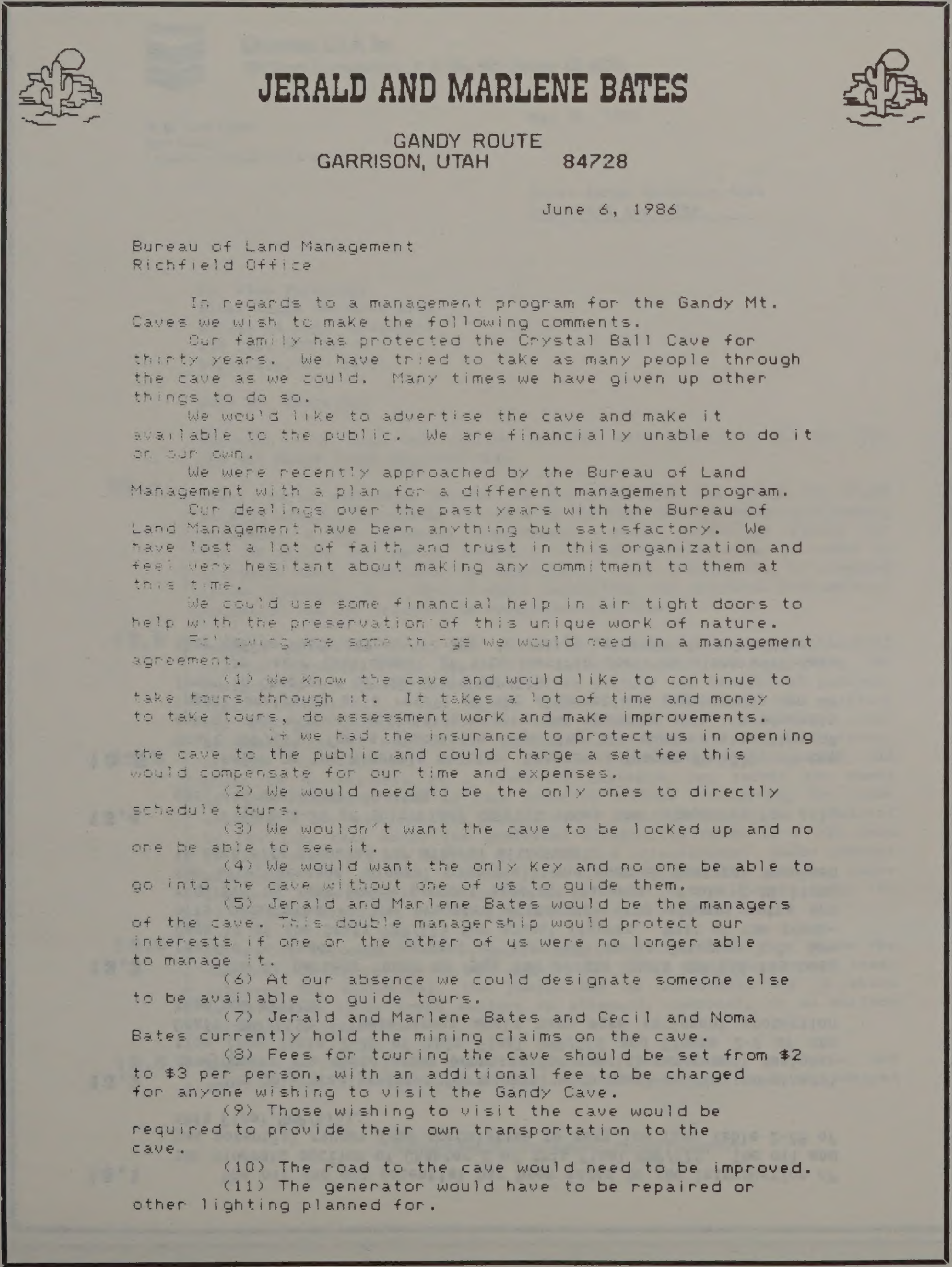
Mr. Alan Partridge
Bureau Of Land Management
Richfield Office

Dear Mr. Partridge;

In going through the environmental impact Statement on resource management plans and talking with others we have decided to send these Comments.

14.1 These are just a few of the suggestions we would need to have considered if we were to Change the way the Cave is presently managed. We are not agreeing to any management program with the B.L.M. or anyone else at this time.

Sincerely;
Marlene Bates



JERALD AND MARLENE BATES

GANDY ROUTE
GARRISON, UTAH 84728

June 6, 1986

Bureau of Land Management
Richfield Office

In regards to a management program for the Gandy Mt. Caves we wish to make the following comments.

Our family has protected the Crystal Ball Cave for thirty years. We have tried to take as many people through the cave as we could. Many times we have given up other things to do so.

We would like to advertise the cave and make it available to the public. We are financially unable to do it on our own.

We were recently approached by the Bureau of Land Management with a plan for a different management program.

Our dealings over the past years with the Bureau of Land Management have been anything but satisfactory. We have lost a lot of faith and trust in this organization and feel very hesitant about making any commitment to them at this time.

We could use some financial help in air tight doors to help with the preservation of this unique work of nature.

Following are some things we would need in a management agreement.

(1) We know the cave and would like to continue to take tours through it. It takes a lot of time and money to take tours, do assessment work and make improvements.

If we had the insurance to protect us in opening the cave to the public and could charge a set fee this would compensate for our time and expenses.

(2) We would need to be the only ones to directly schedule tours.

(3) We wouldn't want the cave to be locked up and no one be able to see it.

(4) We would want the only key and no one be able to go into the cave without one of us to guide them.

(5) Jerald and Marlene Bates would be the managers of the cave. This double managership would protect our interests if one or the other of us were no longer able to manage it.

(6) At our absence we could designate someone else to be available to guide tours.

(7) Jerald and Marlene Bates and Cecil and Noma Bates currently hold the mining claims on the cave.

(8) Fees for touring the cave should be set from $2 to $3 per person, with an additional fee to be charged for anyone wishing to visit the Gandy Cave.

(9) Those wishing to visit the cave would be required to provide their own transportation to the cave.

(10) The road to the cave would need to be improved.

(11) The generator would have to be repaired or other lighting planned for.

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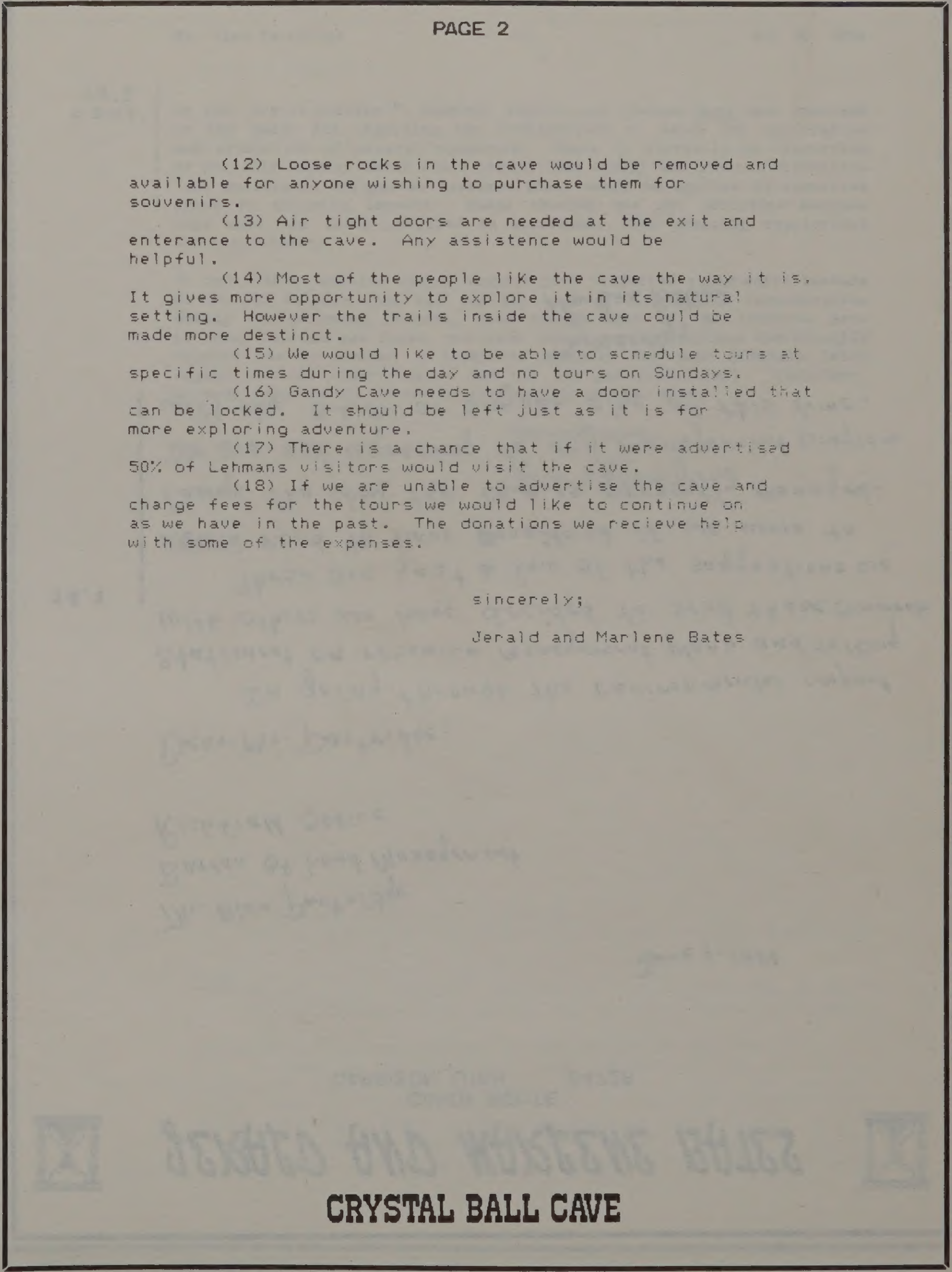

PAGE 2

(12) Loose rocks in the cave would be removed and available for anyone wishing to purchase them for souvenirs.

(13) Air tight doors are needed at the exit and enterance to the cave. Any assistence would be helpful.

(14) Most of the people like the cave the way it is. It gives more opportunity to explore it in its natural setting. However the trails inside the cave could be made more destinct.

(15) We would like to be able to schedule tours at specific times during the day and no tours on Sundays.

(16) Gandy Cave needs to have a door installed that can be locked. It should be left just as it is for more exploring adventure.

(17) There is a chance that if it were advertised 50% of Lehmans visitors would visit the cave.

(18) If we are unable to advertise the cave and charge fees for the tours we would like to continue on as we have in the past. The donations we recieve help with some of the expenses.

sincerely;

Jerald and Marlene Bates

CRYSTAL BALL CAVE

**14.1** BLM appreciates your preserving the caves in near pristine condition since their discovery and your suggestions for future management of this unique geologic feature.

The next step in the resource management planning process will be to develop a detailed management plan for the Gandy Mountain Caves. At that time, we would like to work closely with you in a cooperative effort to ensure the caves' future protection and availability for visitors.

---

June 5, 1986

George Douglass
Callao Star Route, Box 380
Wendover, Utah 84083

Mr. Alan Partridge
Bureau of Land Management
150 East 900 North
Richfield, Utah 84701

Dear Mr Partridge:

I feel that alternative "B" should be the alternative followed for the H.R.R.A.

The time has come for the B.L.M. to move from the dominant use of public land in Utah by the grazing interests to a true multiple use concept that benefits more of the public.

**15.1** Here in Utah the agricultural industry has reached a point where the gross receipts amount to less than 1% of the State's economy, and grazing on public land only contributes 1/6 of those receipts. It makes little sense to have the major use of our land committed to a use that benefits so few people at the expense of the rest.

Utah has the highest birth rate in the nation, some communities the highest in the world. The population is going to double by the year 2000. Utahns are strongly oriented toward outdoor recreation, so the pressure is going to mount on the B.L.M.. The Wasatch National Forest is already predicting that within the next few years people are going to have to have reservations to use canyons along the Wasatch Front.

It is estimated that there are over 40,000 ORV's in the state now and people are buying them at an ever increasing rate. Where are the machines going to be operated? This is going to be a serious problem to

**15.2** resolve. One has only to be caught in the weekend traffic between the Little Sahara Recreation Area and the Wasatch Front to realize how many of these vehicles there are. There may be some additional land suitable for this use among the Pickle Weed hummocks on Fish Springs Flats, just south of the National Wildlife Refuge.

**15.3** Hunting and fishing are one of the largest industries in the State, in fact, they generate more in state sales tax alone than the total receipts from cattle sales. Since the importance of outdoor recreation is on the increase and the range livestock industry is becoming less important (except to those individuals directly involved), the B.L.M. should reflect this change in their management plans.

I am no range specialist, but I am a trained ecologist with seven years experience as a research ecologist at Dugway Proving Grounds, just north of the H.R.R.A., and I am having problems with the conclusions expressed in the Range Conditions and Apparent Trends.

## Comment Letter 15

Mr. Alan Partridge
Bureau of Land Management
Richfield District Office
June 5, 1986
Page 2

15.4 Winds above force four are frequent in the area, and when they blow, the valleys fill with dust, indicating excessive bare ground. When one walks through the various vegetative types, one cannot help but notice the lack of grass and annuals, except for halogeton and various astragalus species, and that the shrubs are hummocked. All of this indicating overgrazing. This all lends credence to the rumor that the B.L.M. came out with the number of A.U.M.'s they wanted and juggled the data to support their predrawn conclusions.

I would like to see a university or some other outside group run the established transects and see if they reach the same conclusions.

I feel that the B.L.M. should adopt alternative "B" for the management of the H.R.R.A.

Thank you for the opportunity to comment on this draft E.I.S.

Sincerely,

George C. Douglass

## Response Letter 15

**15.1** When writing the EIS, the Richfield District was aware that agriculture in Utah makes up a small part of the overall State economy, although in Millard and Juab counties, agriculture is more important. BLM does not feel it should downplay the industry or, conversely, give it special preference. This concept also extended to other sectors that use public lands. Instead, BLM policy is to continue to manage the public lands in an equitable manner to preserve, protect, and enhance its resources.

BLM selected a resource use alternative that balanced grazing use of public lands with other public and private needs.

**15.2** The Fish Springs Flats are proposed as open to off-road vehicles (ORV) use and could accommodate increased activity within the State. However, due to the distance from population centers and lack of unique or challenging terrain, it is unlikely the area would receive a considerable amount of use. Any area established for an intensive use area would be carefully analyzed to ensure the terrain was capable of withstanding heavy use. Also, an activity plan for use of the area would be developed.

**15.3** The estimates you presented for comparison are not correct according to the data available from the State Tax Commission. They estimate that sale taxes from hunting and fishing could be as high as $4,000,000, while gross receipts from livestock sales within the State are estimated as high as $444,000,000 annually. However, the BLM does recognize the importance of the hunting and fishing opportunities provided by the public lands. We have proposed a plan for increasing the potential for fish and wildlife.

**15.4** The plant composition data on Page 51 (Figure 3-1) of the Draft RMP/EIS indicate there is not a lack of grass or annual plant species nor is there a dominant presence of halogeton or astragalus species in the various vegetation types. Based on 333 permanent transects located throughout the resource area, halogeton represents approximately 1 percent of the total plant composition, while annual grasses (cheatgrass) and perennial grass species (such as galleta, Indian ricegrass, needle-and-thread, squirreltail, and a variety of wheatgrasses) account for nearly 31 percent.

The "hummocked" appearance of shrubs is inferred here as a term to describe a watershed condition where sediments at the base of a plant collect, forming a hummock. This condition occurs naturally in areas, such as the Little Sahara sand dunes, where there is a shifting substrate of sand. There is little evidence of hummocked plants through the resource area that may be attributed to overgrazing. As depicted on Page 107 (Table 3-12) of the Draft RMP/EIS, only 2 percent of the resource area is presently in the critical erosion condition class, due to geologic conditions, and no areas have been identified in the severe class.

The BLM's current method of rangeland inventory in the HRRA is briefly described in Appendix 1 of the Draft RMP/EIS. As with all resource inventories, the BLM maintains an objective approach in the collection and analysis of range resource data. The proposed levels of forage appropriated to each grazing animal (domestic or wild) are the BLM's "best estimate," when considering a balance of uses.

## Comment Letter 16

DEPARTMENT OF DEFENSE UNITED STATES OF AMERICA

DEPARTMENT OF THE AIR FORCE
6501st RANGE SQUADRON (AFSC)
HILL AIR FORCE BASE, UTAH 84056-5000

JUN 09 1986

REPLY TO ATTN OF: CC

SUBJECT: Resource Management Plan - Environmental Impact Statement
House Range Resource Area

TO: Mr Alan Partridge
Bureau of Land Management
Richfield District Office
150 East 900 North
Richfield, UT 84701

1. This letter represents our formal response to the DRAFT Environmental Impact Statement for the House Range Resource Area. Questions or comments should be referred to Barry Webster, 299RCS/DOX, Hill AFB, UT 84056-5000, Telephone Nr (801) 777-9557.

**16.1** 2. We take no position on which alternative should be adopted, however, certain requirements to use BLM land are essential to mission effectiveness. We request assurances that existing Letters of Agreement will remain in effect. The Utah Test and Training Range is a rare and precious resource. It is essential to us that the final management plan reflect the on going requirement the Air Force has for use of lands from time to time. We, as in the past, will return the land to its natural state unless other agreements are made. The Visual Resource Management Program will be adhered to.

3. Request you review current Letters of Agreement between BLM (Richfield District Office) and Air Force (6501RANGES). If there are any questions or conflicts that may impact the final EIS contact Mr Webster immediately for resolution.

Brian O'Hara

BRIAN O'HARA, Lt Col, USAF
Commander

## Response Letter 16

**16.1** BLM recognizes the critical role that public lands in the HRRA play with the Air Force's Utah Test and Training Program. The alternatives considered in this EIS are not expected to affect the continuing Air Force requirements. The RMP will not affect any letters of agreement between Richfield District BLM and the Air Force.

721 Second Avenue
Salt Lake City
Utah 84103

June 7, 1986

Resource Area Manager
House Range Resource Area
Bureau of Land Management
Fillmore, Utah

Dear Sir:

We have read your draft plan for the House Range Resource Management Area. Our comments will be confined to the Deep Creeks and to the House Range.

DEEP CREEKS. The Resource Mangement Preferred Plan recommends that the Deep Creeks be classified as Outstanding Natural Area with mineral, ORV, and oil and gas leasing restrictions. Since this is an alternative to wilderness should the Deep Creeks not be designated as wilderness, we
**17.1** strongly support your plan. However, with its unique biological community (with or without designations as Widlerness or Outstanding Natural Area, the Deep Creeks should be closely examined for recreational compatibility.

**17.2** Thus we ask the following questions concerning the management of the Deep Creek:

1) Where will the terminus of the Granite Canyon Road be and what facilities will occur at the terminus? How many vehicles will the terminus allow for parking? Will there be sanitation facilities at the terminus? What happens when the terminus is filled with vehicles and where will these vehicles park? What will be the impact at the terminus of the road if the Deep Creeks get a 1000 visitors a year (some canyons in southern Utah get 8000 visitors a year)? What happens to the terminus and the vehicle use if the roads are wet as in early spring or after a summer storm? Would preservation of Deep Creek Outstanding Natural Area be better served by having vehicular parking at the mouth of the canyons (and use the roads for management purposes only)?

2) What is the carrying capacity of recreationists in the Deep Creeks such that the biological communities will be preserved? Would the biological community best be served by activating the CCC trails? Should backpacking camping sites be established?

We feel that the best recommendation for recreationist's trail heads is to establish these trail heads at the mouth of the canyons. In this manner, a visitor can immediately see the use that the canyon is getting at this time and hence direct the recreational activity to other destinations even within the same region.

-2-

**17.3** SWASEY PEAK IN THE HOUSE RANGE. On page 50 there is mention of ecologically unique areas: "The Deep Creek Mountains are considered ecologically unique due to their isolation and presence of endemic species". A second mountain, the Swasey Mountain of the House Range may be just as ecologically unique. Although many studies have occurred on the Deep Creeks, if similar number of studies were performed on Swasey Mountain we would suggest that Swasey Mountain could be just as ecological unique.

Thus we support your action of ORV restrictions within the region and your oil and gas leasing category of #3. We would recommend that you withdraw Swasey Mountain from mineral entry. We would suggest that Swasey Mountain be designated as an Outstanding Natural Area.

**17.4** The Antelope Springs area is presently heavily used by two,three and four wheelers to the detriment of those who would like to camp in a quiet zone for the weekend. Although the ORV use is largely confined to the impacted zone and roads and ways, the noise from the vehicles is very prominent. Utah Nature Study Society suggests that the Bureau of Land Management establish a campsite near the region in which ORV recreation, loud radios and other urban intrusions not be permitted.

**17.5** The road past Antelope Springs to the BLM chained areas and Tule Valley overlooks is sometimes in very bad shape. ORV use under these conditions further deteriorate the road by wheel spinnings. This last Memorial Day one visitor (not a party to UNSS) broke a hole in their transmisson. We would suggest that the Bureau of Land Management post a sign about the nature of the road and close the road with a locked gate (at a good turning around position) when the road is deteriorated or wet. Furthermore, we would recommend that beyond the gate that ORV use is restricted to the road.

In reviewing the Preferred Plan (Plan D) of the House Range Resource Management Area, Utah Nature Study Society feels that the Bureau of Land Management has done a superd job in recognition of the unique features, the unique biological communities, and the importance of recreation within the region. We would hope that the BLM can obtain funding to best manage these resources.

We thank you for the opportunity to commit on the plan.

Sincerely,
Peter Hovingh

Peter Hovingh
Chairman, Issues committee
Utah Nature Study Society

## Response Letter 17

**17.1** The Utah Statewide Wilderness EIS will analyze the Deep Creek Mountains for potential as a wilderness area. The HRRA RMP/EIS addresses other options available for preservation of significant resource values if the Deep Creek Mountains are not designated as wilderness.

**17.2** Alternatives B and D propose to designate the Deep Creek Mountains as an Outstanding Natural Area (ONA). The RMP provides only an overview analysis to determine if the area meets designation criteria and what general concerns need to be considered for adequate protection. If this area receives special management designation, a site-specific detailed management plan would be written and implemented to address your concerns. The plan's objective would be to protect the unique features of the area.

**17.3** Swasey Peak is inside the Swasey Mountain WSA (49,500 acres). Currently, the ecological values are protected by the BLM Wilderness Interim Management Policy (IMP). Although there is a great diversity of plant and animal species, the lack of critical wildlife habitat; threatened, endangered, or sensitive plants; and perennial streams makes this range less ecologically significant than the Deep Creek Mountains. The RMP planning process has not identified a need to designate this area as an ONA.

**17.4** The Swasey Mountains, of which the Antelope Springs area is a part, are recommended as a Special Recreation Management Area (SRMA). A recreation activity plan would be developed for the area. An important aspect of the plan would be to provide a safe, conducive atmosphere for those using the area. A campground may be a viable element of the plan. Public input, such as yours, will help us to identify the visitor use conflicts and ways to resolve them.

**17.5** Posting signs regarding the nature of the road, closure during certain periods of the year, and restricting use to the road are all actions that would be implemented under alternatives B and D as part of the "limited" category for ORV use on Swasey Mountain.

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## Comment Letter 18

**INTERMOUNTAIN WATER ALLIANCE**
168 West 500 North
Salt Lake City
Utah 84103
801-531-7330

721 Second Avenue
Salt Lake City
Utah 84103

June 7, 1986

Resource Area Manager
House Range Resource Management Area
Bureau of Land Management
Fillmore, Utah

Dear Sir:

18.1 Enclosed are the recommendations of Intermountain Water Alliance on the management of the unique springs in the House Range Resource Area. Please include this statement in your planning process for the House Range RMP. Also included in with the statement are two resource papers concerning the dating of the pluvial events and the archeological data. These papers were referenced in our statement but you may wish to see the actual work.

Our basic recommendations include:

1) Designation of South Tule Springs and North Willow Springs in Tule Valley and Gandy Salt Marsh as Research Natural Areas
2) Fencing of the above springs as first priority
3) Place these springs in oil and gas category of #4
4) Withdraw these springs from mineral entry
5) Provide funding for the study of the management of these springs and for baseline data

18.2

6) Fence off a portion of the springs-wetlands for habitat for the Swasey spring pocket gopher.

The rationale for the above recommendations are included and attached to this letter.

18.3 We appreciate your recommendations for the protection of the riparian habitat and desert springs. Our recommendations take into account that biological research is perhaps the most single important use of the South Tule, North Willow and Gandy Salt Marsh springs and that livestock is the chief competitor of such use. We do encourage the BLM to work together with the livestock permittees to bring other supplies of water to the range.

Thank you very much and it has been a pleasure working with you for these many years.

Sincerely,

Peter Hovingh

Peter Hovingh

COMMENTS FOR THE DRAFT ENVIRONMENTAL IMPACT STATEMENTS

18.4 The biggest deficiencies in the Draft Resource Management Plans were the lack of the description of the role Lake Bonneville had on the aquatic systems of the areas under discussion. To begin the story of Lake Bonneville one learns that prior to 32000 years ago the region may have been a saline basin. The Stansbury level (4500 feet) was reached some 22,000 years ago. This level occurs in the House Range Resource Management Area in the Fish Springs Flat and the region south of Callao. Another shoreline occurred as the lake began to flow into Tule Valley over Sand Pass- perhaps about 19,500 years ago. This shoreline is about 36 feet below the Provo shoreline. The lake continued to rise to the Bonneville level at 5092 feet (17,000 years ago). A major drop occurred some 15,000 to 16,000 years ago and the lake subsequently rose again to the Bonneville threshold of 5092 feet. Some 15,000 years ago the threshold gave way and the lake rapidly dropped to the next threshold at the Provo level (4737 feet). This level was maintained until about 14,000 years ago. Subsequently the lake rapidly dried to 4137 feet in 2500 years (some 11,500 years ago) (1,2)

While the lake was at the Provo level, Tule Valley became a body of water that was more saline than the ocean as indicated by the oolitic sands. This is the only occurrance of oolitic sands at the Provo level in the entire Bonneville Basin. During this time one can imagine that Tule Valley became an evaporizing basin with the Bonneville Lake providing the fresh water for concentration. With the saline nature of Tule Valley during this time, the mollusks and fish were probably exterminated from the valley.

1) Donald R. Currey and Charles G. Oviatt, 1985. Durations, Average Rates and Probably Causes of Lake Bonneville Expansions, Stillstands, and Contractions During the Last Deep-Lake Cycle, 32,000 to 10,000 years ago. In "Problems of and Prospects for Predicting Great Salt Lake Levels", ed. Paul A. Kay and Henry F. Diaz. Center for Public Affairs and Administration, University of Utah. 309 pp.

2) Donald R. Currey, Genevieve Atwood, and Don R. Mabey, 1984. Major Levels of Great Salt Lake and Lake Bonneville. Map 73. Utah Geological and Mineral Survey.

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From the perspective of the House Range and Warm Springs Resource Areas,
the influence of Lake Bonneville on the regions aquatic systems stopped
some 11,000 years ago. Although as many as five wet cycles occurred in the
last 11,000 years, the highest elevations was that of the Gilbert shoreline
of 4250 feet and at this level, the water was saline. Thus, the aquatic
systems of Snake Valley, Tule Valley and Sevier Basin were isolated from
each other and from the northern Bonneville Basin influence for 11,000
years. The various levels of Lake Bonneville has had subsequent influence
on the terrestrial plant life with each valley and each lake level having
the potential of different genetic variety of shadscale and other members
18.5 of the *Atriplex* genera. This influence may affect both the productivity
of the land with respect to wildlife and livestock grazing and with respect
of ground cover and instant destruction by insects or climatic variations
due to the genetic uniformity of the species in each valley (3).

18.6 From the archeological record, the earliest documented man in the Bonneville Basin occurred some 12,000 years ago. There is not any evidence that man saw Lake Bonneville. The Paleo-Indian/Big Game Hunters occurred during the 12,000 to 9,000 years ago, early Archaic from 8500 to 5500 years ago, Middle Archaic from 5500 to 3500 years ago and Lake Archaic from 3500 to 2000 years ago. The Sevier/Fremont culture lasted from 1600 to 650 years ago. As noted by the obsidian chips and arrow hears, the marshes of Tule Valley, Snake Valley, Fish Springs and Sevier River must have always been important for early many. The dates quoted here are in conflict with those in the Draft Management Plan.(4).

3)H.C. Stutz and S.C. Sanderson, 1983. Evolutionary Studies of Atriplex: Chromosome Races of A. Confertifolia (shadscale). Amer. J. Bot. 70: 1536-1547.

4) David B. Madsen, 1982. Get it where the gettin's good: A variable model of Great Basin Subsistence and Settlement based on data from the eastern Great Basin. In "Man and the Environment in the Great Basin", ed. David B. Madsen and James F. O'Connell. Society for American Archaeology. 242 pp.

MANAGEMENT OF WATER RESOURCES

18.7 Within Warm Springs and House Range Resource Areas, every water resource should be treated as if relict populations of plants and animals occur within the system and that these plants and animals may have been isolated for 11,000 years. From the scientific perspective, the question arises 1) whether there are species now living in these systems that may not occur anywhere else in the world and 2) whether any genetic differentiation has occurred among the isolated populations during this 11,000 years. Water resources that have not obviously been manipulated (no exotic mollusks, crayfish, frogs, or fish; no agricultural diversions) should be examined closely and managed as Research Natural Areas since their greatest value is for research purposes.

Under these criteria, the Gandy Salt Marsh Springs, South Tule Springs North Willow (in Tule Valley), and the south portion of the Coyote Springs complex (in Tule Valley) should be protected from any recreation, withdrawn from livestock use and manipulation, withdrawn from agricultural diversions, withdrawn from mineral entry, placed in Oil and Gas leasing category of #4, and fenced. Although Leland Harris Springs Complex and the Twin Springs-Bishop Footes Reservoir both provide large wetlands diversity, the ownership pattern of these springs may prevent the appropriate protection. The Twin Springs complex furthermore is full of exotic species as carp, bass and bullfrogs.

RATIONALE FOR PROTECTION OF SPRINGS

1) The occurrance of relict populations of vertebrates. Gandy Salt Marsh and Leland Harris springs contain native fishes, the dominant of which appears to be the Least Chub, but also Utah Chub and speckled dace. The Least Chub was once distributed throughout the Bonneville Basin. The Western Spotted Frog is also found in abundance in the South Tule, North Willow, and Coyote Springs in Tule Valley and in abundance in the Gandy Salt Marsh Springs (and a single observation in Leland Harris spring). Although the Western Spotted Frog is also found in the Deep Creek drainage, extinction of the species may have occurred in Twin Springs, and along the Wasatch Front (Salt Lake, Utah, Summit, and Wasatch Counties).

2) Management. Gandy Salt Marsh springs and the Tule Valley springs appear to be on BLM lands and hence the management of the springs is under one land manager. South Tule Springs and North Willow Springs are the least accessible in Tule Valley and hence the least likely to have water applications and exotic species introduced. Gandy Salt Marsh Springs borders the saline ponds and hence could be readily fenced to protect both the springs, the associated wetlands and the adjacent saline shores.

3). Current management. Each year it seems that the livestock operator deposits salt blocks in the "watershed" of the springs and at the same time burns off the previous years bulrushes. This management practice should be under the control of the wildlife or the land managers. Be fencing these North Willow, South Tule, south Coyote springs, and Gandy Salt Marsh Springs, water development from other springs could assist the livestock operator. There are plenty of water sources in Snake Valley and the operator may even be encouraged to truck the water to new water troughs. The present grazing of livestock in the Tule Valley springs-wetlands is actually DAMAGING to the wetlands in that the cattle continue to break trough the fragile top soil and create a funnel through which the water re-enters the subsurface aquifers. This results in the lost of additional wetlands.

4) Although the Western Spotted Frog and the Least Chub occur together in the Gandy Salt Marsh springs, the introduction of Least Chub into the Tule Valley springs that are presently fishless may have unknown effects of the native species. South Tule and Willow Springs should be exempt from future considerations of the transplant. Since Tule Valley springs have evolved under fishless conditions, the aquatic populations may be very different from the adjacent Snake Valley populations. A population transplant of Least Chub could occur in the North Tule Springs complex after the physical (not chemical) removal of the exotic fish. Coyote Springs could also be considered as a transplant location.

5). A study of the genetic differentiation of the Western Spotted Frogs in South Tule, North Tule, North Willow and Coyote Springs in Tule Valley and Gandy Salt Marsh and Deep Creek in Snake Valleys should be undertaken. Control specimens from the Wasatch Front, Reese River in Nevada and some locations in Idaho should be used.

6) The BLM should encourage the dating of the mollusks in Tule Valley. At this time one finds shells of Lymnaeidae, Physidae, and Helisoma in the saline flats east of Coyote Springs. This same assemblage appears in the distil end of Twin Springs complex in Snake Valley. Two other species appear in the Shadscale area of Tule Valley. The radiodating of the mollusk may provide clues to when Tule Valley became saline and also to clues to fresh water sources which aided the Western Spotted Frog's entrance to the valley after the saline lake desiccated. Any backhoe work in Tule Valley should be preceeded with a notification and funding for the radio-carbon dating. Presently the Department of Geography at the University of Utah is doing this type of work.

7) Desert springs are becoming a rare natural resource. With the introduction of bullfrogs, bass, and carp into the Twin Springs/Bishop Footes Reservoir complex and the possible introduction of Leopard Frogs, these springs have been heavily impacted by the exotic species. Further, agricultural diversions and manipulations have reduced their naturalness. In 1968 the Western Spotted Frog was collected from Bishop Footes Reservoir. Some nine hours of efforts and failed to relocate this species. Leopard Frogs are very common throughout the springs-complex and may well have displaced the Western Spotted Frog. The large Planorb snail Helisoma is found in abundance in the periphery of the springs-wetlands and has not been found in some 73 other springs-wetlands in Tule, Snake, Spring (Nevada) or Steptoe (Nevada) valleys.

8) With the extensive distribution of Leopard Frogs in central Snake Valley and with their finding in the southernmost springs of Gandy Salt Marsh, monitoring of the Leopard Frogs in the Gandy Salt Marsh is imperative in view of the fact that these frogs are known to displace the Western Spotted Frogs.

9) Although in the case of Helisoma, Western Spotted Frog, Least Chub and Utah Chub were widely distributed in the Bonneville Basin, it has become apparent that these species and perhaps many more species have been exterminated from much of their former ranges in the eastern Bonneville Basin. Thus it is important to preserve by fencing and the appropriate withdrawals

the few natural springs in which these native species survive. Close monitoring of the springs is encouraged. High priority should be given to classification of these springs as Natural Research Areas.

MANIPULATIONS. Fencing of Gandy Salt Marsh springs in Snake Valley, South Tule springs and North Willow Springs in Tule Valley should have high priority in the fencing of the springs-wetlands. The BLM is to be complemented for recognize the importance of fencing the wetlands and springs. Fences should be built such that investigators can enter the wetlands without extraordinary contortions and perhaps should be designed to allow antelope to enter. At this time sheep are not a problem- just cattle and perhaps motorized recreationists.

The lands should be withdrawn from mineral entry. Recently a large portion of North Tule Springs was staked and claimed for a mill site. Mineral entry withdrawals would have prevented this type of claim. Likewise water should not be utilized for large scale usage as oil drilling.

**18.8** After reading both the House Range and Warm Springs management plans, it is uncertain who manages the South Tule Springs complex. In the House Range plan, it appears as the Tule Valley (or Tule Springs grazing allotment. In the Warm Springs plan it appears in the Skunk Springs grazing allotment. If there is uncertainty over the allotment and the Resource Management Area, it seems from the spring-wetlands management choices that South Tule springs should be managed by the Resource Area manager that manages North Willow, North Tule, Coyote, and even the Gandy Salt Marsh springs. This recommendation is only to bring about a consistent pattern and view point of management.

The presence of the Clear Lake Pocket Gopher (Warm Springs) and the Swasey spring pocket gopher (House Range) suggests that some region near the habitable springs be fenced to provide maximum forage for the pocket gophers. Again these species may be relict populations from pluvial times.

**18.1** Alternative B proposes to designate North Willow Springs in Tule Valley and the Gandy Salt Marsh as Areas of Critical Environmental Concern (ACECs) to protect the least chub and the associated eco-system. The option to designate these areas as Research Natural Areas (RNAs) presupposes that active investigative programs would be conducted by universities or the scientific community; however, BLM currently has not identified this need.

**18.2** The Swasey Spring pocket gopher, Thomomys umbrinus sevieri, is considered a sensitive species by the BLM. This species was accidentally omitted from Page 76 of the Draft RMP/EIS. Prior to any habitat improvement work in the Swasey Mountain area, an inventory for the presence of this species would be conducted.

**18.3** Refer to Comment Response 18.1.

**18.4** The National Environmental Policy Act (NEPA) requires only those elements of the existing environment that might be significantly affected by proposed actions should be described in detail. Peripheral environmental data are included only to the extent necessary to provide a basis for comparison. Descriptions of former Lake Bonneville have no direct bearing on the existing environment affected by the alternatives presented; therefore, this information was not included in this EIS.

**18.5** Refer to Comment Response 18.4.

**18.6** Thank you for your elaboration of the dates recorded in the text.

**18.7** Refer to Comment Response 18.1.

**18.8** The South Tule Spring complex is located in the Skunk Springs Allotment which is managed by the Warm Springs Resource Area (WSRA).

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SALT LAKE GROTTO

Chapter of the
NATIONAL SPELEOLOGICAL SOCIETY

4230 Sovereign Way
Salt Lake City, UT 84124
June 10, 1986

Mr. Allan Partridge
Bureau of Land Management
Richfield District Office
150 East 900 North
Richfield, UT 84701

Dear Mr. Partridge,

The members of the Salt Lake Grotto, National Speleological Society, have reviewed the Draft Environmental Impact Statement for the House Range Resource Area and submit the following comments.

Two of Utah's most significant spelelogical resources are within the HRRA, Antelope Springs Cave and Crystal Ball Cave. Your prefered Alternative D provides for special management for these two caves which we fully support.

Caves are unique, non-renewable resources. They are finite in number and take hundreds of thousands, even millions, of years to create. The beautiful crystalline formations they contain within are many times unique and irreplaceable. Whereas overgrazed land, destroyed riparian habitat and diminished wildlife herds can be restored, given enough time and money, once a cave's formations are destroyed they are gone forever.

Our Grotto first visited Crystal Ball Cave in 1957, shortly after its discovery. We made the cave's first map and one of our members mapped the digging location for the north entrance. In May, 1957, we unsuccessfully petitioned the National Park Service to consider the cave for inclusion in the National Park System. The huge crystals which cover the inner surface makes Crystal Ball Cave one of the most unique caves on BLM land. We strongly believe it deserves all of the protection which can be given it.

While the Bates and (formerly) Sims families have maintained the cave in essentially pristine condition we are concerned with the very long-term future. In the event they were unable to provide protection, even for a short duration, most of the cave's values could be destroyed in a single weekend. Organized groups of rock collectors have done this to other caves.

## Comment Letter 19

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We believe that the BLM is capable of providing the long-term protection for the Gandy Mountain Caves, which includes Crystal Ball Cave. This would require a mineral withdrawal on the area. The proposed expansion of the protected area to 1,120 acres and designation as an ACEC is also supported by us as it would help prevent surface and subsurface deterioration.

The cave should remain available for public viewing. The nearby Bates family could provide a guide service. Regular hours and an adequate guide fee should be established. Under BLM management, some limited advertisement could enhance the guide service revenue.

Because of installation and maintenance expense of a lighting system we would prefer that the cave and all existing wiring be removed and visitors provide or rent (from the Bates') adequate lighting and head protection. Our organization is willing to provide labor to install new, airtight gates and assist with their design.

Antelope Springs Cave has been one of the Salt Lake Grotto's most visited caves since our first trip in May, 1953. Some of our present group have been going to the cave since 1957, nearly 30 years, so we have a fairly good idea of comparitive conditions in the cave, then and now.

The past 10 years have seen a gradual increase in vandalism. Breakage of the cave's formations has not increased as significantly as has spray paint graffiti. Though not impossible to remove, it is difficult and time consuming. All areas of the cave have seen deterioration from increased traffic. Much of the damage does not appear to be malicious but merely careless and thoughtless actions.

19.1 Under the prefered Alternative D proposal, 150 acres around Antelope Springs Cave would be designated as a Class III Recreation Area and a Special Recreation Management Area which will provide possible funding and protection. Our organization supports this proposal in principle but not enough specific detail is given as to what constitutes management or protection.

We believe that because of the remote location no management or protection can be effective without some way of restricting access to the cave by installing a gate. Attempting to prevent vandalism through signs, etc., would be futile.

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## Comment Letter 19

page 3

Installing a gate on the cave with previously unrestricted access would probably cause some initial negative reaction, especially by those who have traveled a few hundred miles. There appears to be no way of gating without offending many people, including those who act responsibly.

Deriving a management plan and applying it to the cave after gating would be a complex process, beyond the scope of this letter. If this route of management/protection is taken, the Salt Lake Grotto is willing to assist with the planning and installation and to discuss a Cooperative Management Agreement to maintain the cave's resources.

For the Salt Lake Grotto,

Dale J Green

Dale J. Green
Chairman

## Response Letter 19

**19.1** When a management plan is prepared for Antelope Springs Cave, it will follow the guidance provided in the BLM Cave Management Policy. Richfield District BLM would welcome input from the Utah Chapters of the National Speleological Society when this plan is being formulated. Also, refer to Comment Response 17.2.

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## Comment Letter 20

The Nature Conservancy

Utah Public Lands Protection Planning
2225 South Highway 89-91
Wellsville, Utah 84339
(801) 752-4154

June 10, 1986

Mr. Alan Partridge
USDI Bureau of Land Management
Richfield District Office
150 East 900 North
Richfield, UT 84701

Dear Mr. Partridge:

Thank you for this opportunity to comment on the Draft Resource Management Plan and Environmental Impact Statement (RMP/EIS) for the House Range Resource Area (HRRA). I welcome this chance to be involved in the planning that will guide the future direction of the Resource Area.

Let me preface my comments with some brief words about The Nature Conservancy. The Conservancy is a non-profit conservation organization whose purpose is to assure the maintenance of natural biological diversity. This means that we identify and seek protection for examples of the full array of ecosystems and species in the natural world. We are focusing our resources on those parts or "elements" of the natural world that are the most scarce: rare plant and animal species, rare communities, and undisturbed examples of common communities.

The Conservancy's Rocky Mountain Heritage Task Force functions as a region-wide biological data base. They have summarized the best scientific information available on the locations of Utah's rare species and communities. In working with these data, I have found that the majority of Utah's rare species and natural areas occur on federally-administered lands. This is not surprising in light of the fact that about two-thirds of Utah is under federal ownership.

Based on this scientific information, one of my objectives is to work with the Bureau of Land Management (BLM) to assure the maintenance of certain rare species and natural areas on public lands in Utah. Protection of these species and areas can provide scientific, educational and recreational benefits for the people of Utah and specifically for users of the House Range Resource Area.

(p. 2)

National Office, 1800 North Kent Street, Arlington, Virginia 22209

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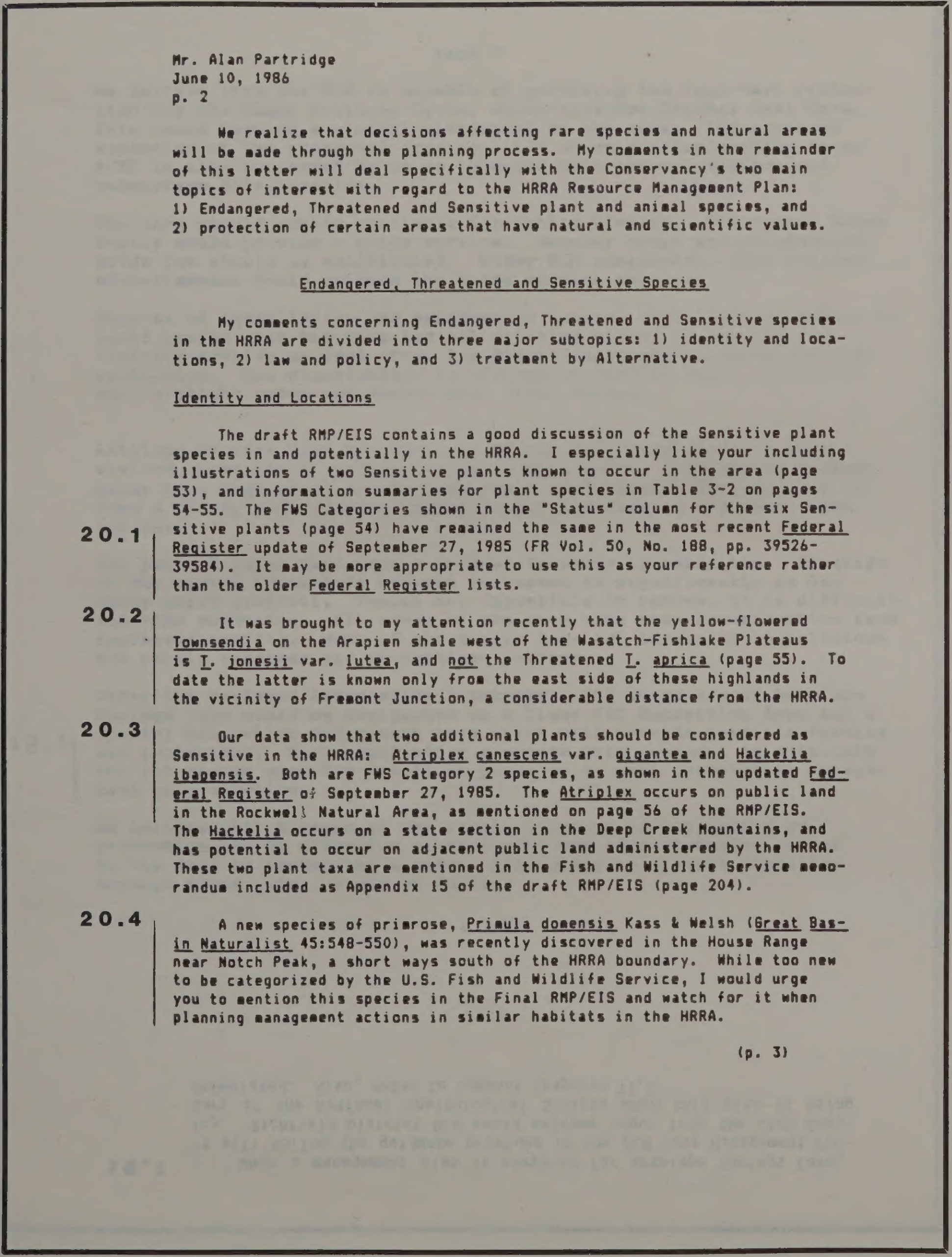

Mr. Alan Partridge
June 10, 1986
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We realize that decisions affecting rare species and natural areas will be made through the planning process. My comments in the remainder of this letter will deal specifically with the Conservancy's two main topics of interest with regard to the HRRA Resource Management Plan:
1) Endangered, Threatened and Sensitive plant and animal species, and
2) protection of certain areas that have natural and scientific values.

Endangered, Threatened and Sensitive Species

My comments concerning Endangered, Threatened and Sensitive species in the HRRA are divided into three major subtopics: 1) identity and locations, 2) law and policy, and 3) treatment by Alternative.

Identity and Locations

The draft RMP/EIS contains a good discussion of the Sensitive plant
species in and potentially in the HRRA. I especially like your including
illustrations of two Sensitive plants known to occur in the area (page
53), and information summaries for plant species in Table 3-2 on pages
54-55. The FWS Categories shown in the "Status" column for the six Sen-
20.1 sitive plants (page 54) have remained the same in the most recent Federal
Register update of September 27, 1985 (FR Vol. 50, No. 188, pp. 39526-
39584). It may be more appropriate to use this as your reference rather
than the older Federal Register lists.

20.2 It was brought to my attention recently that the yellow-flowered Townsendia on the Arapien shale west of the Wasatch-Fishlake Plateaus is *T. jonesii* var. *lutea*, and not the Threatened *T. aprica* (page 55). To date the latter is known only from the east side of these highlands in the vicinity of Fremont Junction, a considerable distance from the HRRA.

20.3 Our data show that two additional plants should be considered as Sensitive in the HRRA: *Atriplex canescens* var. *gigantea* and *Hackelia ibapensis*. Both are FWS Category 2 species, as shown in the updated Federal Register of September 27, 1985. The *Atriplex* occurs on public land in the Rockwell Natural Area, as mentioned on page 56 of the RMP/EIS. The *Hackelia* occurs on a state section in the Deep Creek Mountains, and has potential to occur on adjacent public land administered by the HRRA. These two plant taxa are mentioned in the Fish and Wildlife Service memorandum included as Appendix 15 of the draft RMP/EIS (page 204).

20.4 A new species of primrose, *Primula domensis* Kass & Welsh (Great Basin Naturalist 45:548-550), was recently discovered in the House Range near Notch Peak, a short ways south of the HRRA boundary. While too new to be categorized by the U.S. Fish and Wildlife Service, I would urge you to mention this species in the Final RMP/EIS and watch for it when planning management actions in similar habitats in the HRRA.

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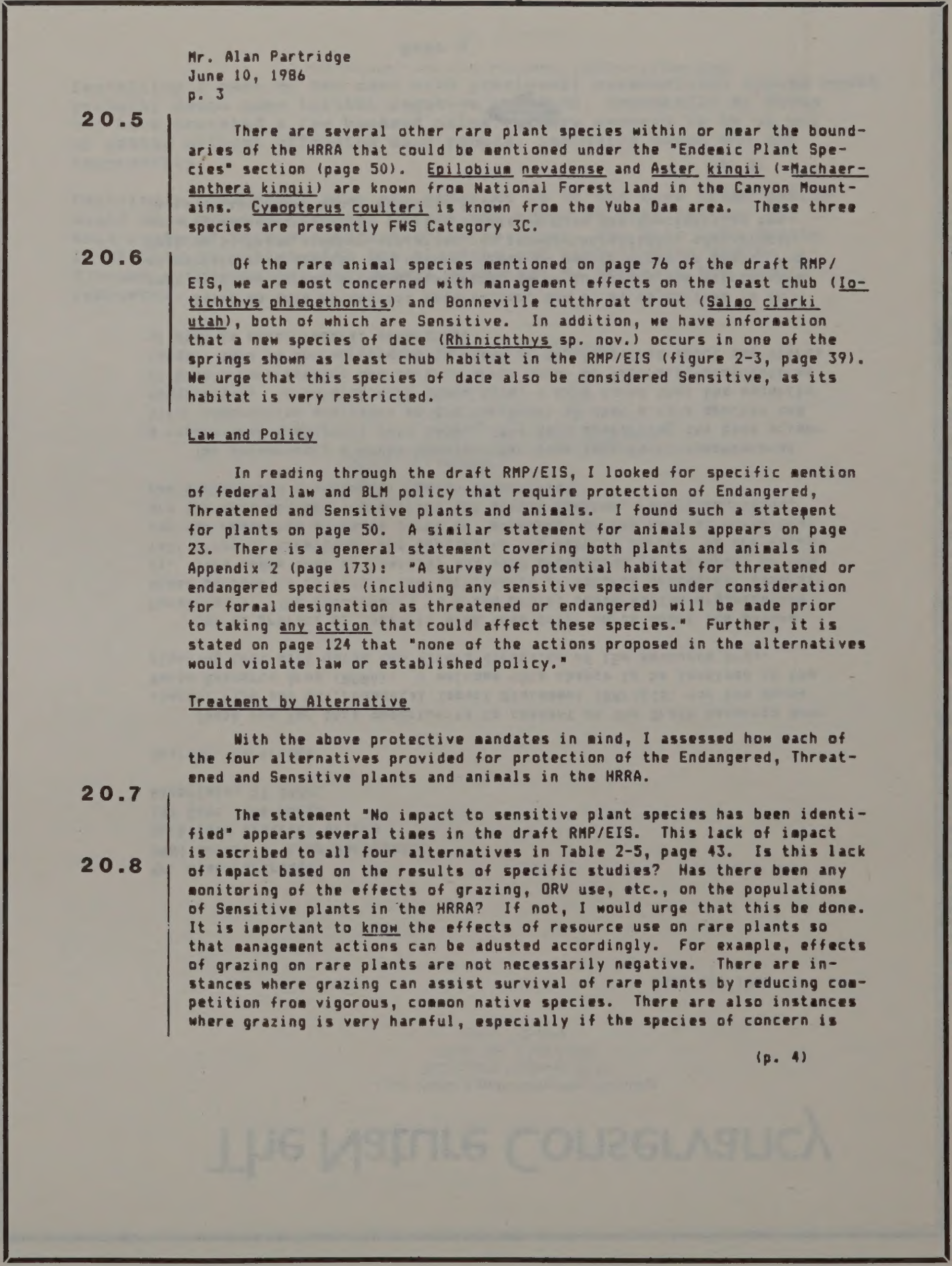

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20.5 There are several other rare plant species within or near the boundaries of the HRRA that could be mentioned under the "Endemic Plant Species" section (page 50). *Epilobium nevadense* and *Aster kingii* (=*Machaeranthera kingii*) are known from National Forest land in the Canyon Mountains. *Cymopterus coulteri* is known from the Yuba Dam area. These three species are presently FWS Category 3C.

20.6 Of the rare animal species mentioned on page 76 of the draft RMP/EIS, we are most concerned with management effects on the least chub (*Iotichthys phlegethontis*) and Bonneville cutthroat trout (*Salmo clarki utah*), both of which are Sensitive. In addition, we have information that a new species of dace (*Rhinichthys* sp. nov.) occurs in one of the springs shown as least chub habitat in the RMP/EIS (figure 2-3, page 39). We urge that this species of dace also be considered Sensitive, as its habitat is very restricted.

Law and Policy

In reading through the draft RMP/EIS, I looked for specific mention of federal law and BLM policy that require protection of Endangered, Threatened and Sensitive plants and animals. I found such a statement for plants on page 50. A similar statement for animals appears on page 23. There is a general statement covering both plants and animals in Appendix 2 (page 173): "A survey of potential habitat for threatened or endangered species (including any sensitive species under consideration for formal designation as threatened or endangered) will be made prior to taking any action that could affect these species." Further, it is stated on page 124 that "none of the actions proposed in the alternatives would violate law or established policy."

Treatment by Alternative

With the above protective mandates in mind, I assessed how each of the four alternatives provided for protection of the Endangered, Threatened and Sensitive plants and animals in the HRRA.

20.7 The statement "No impact to sensitive plant species has been identi-
fied" appears several times in the draft RMP/EIS. This lack of impact
20.8 is ascribed to all four alternatives in Table 2-5, page 43. Is this lack
of impact based on the results of specific studies? Has there been any
monitoring of the effects of grazing, ORV use, etc., on the populations
of Sensitive plants in the HRRA? If not, I would urge that this be done.
It is important to know the effects of resource use on rare plants so
that management actions can be adusted accordingly. For example, effects
of grazing on rare plants are not necessarily negative. There are in-
stances where grazing can assist survival of rare plants by reducing com-
petition from vigorous, common native species. There are also instances
where grazing is very harmful, especially if the species of concern is

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20.8 cont. highly palatable. Perhaps monitoring studies could be incorporated in new or revised AMP's in the allotments that contain the Sensitive plant species, regardless of which alternative is implemented.

20.9 There are some differences among alternatives regarding protection for the three fish species of interest to the Conservancy (least chub, Bonneville cutthroat trout, newly-described dace). These differences are apparent in two contexts within the draft RMP/EIS: 1) directly, under the topic of Endangered or Sensitive species, and 2) indirectly, under the topic of riparian/wetland habitat, to which these fish are restricted.

These fish species, and the riparian/wetland habitats in which they live, would be adversely affected by grazing and/or other uses under a continuation of current management (Alternative A). This is stated or implied several places in the draft RMP/EIS:

* Pages 6, 43, 135, 159: Populations of Bonneville cutthroat trout and least chub would decline over the long term under Alternative A.

* Pages 23, 128: Livestock season of use in the spring on the Gandy allotment has caused a downward trend of riparian habitat along Salt Marsh Lake (least chub habitat).

* Pages 43, 83, 84, 134: Under Alternative A, 23 percent of streamside riparian habitat would remain in poor condition; most desert wetland springs would remain in fair condition but in a downward trend, and one spring would remain in poor condition.

* Page 76: One factor that contributes toward limiting the least chub is livestock grazing of the riparian zone.

* Page 127: It is estimated that over 80 percent of the existing riparian communities may have some impacts related to cattle grazing.

* Page 129: It would be expected that the vigor and stability of riparian stream vegetation would decline on stream segments presently used by livestock.

* Page 138: Under Alternative A, long-term overutilization of livestock forage in certain areas would result in deterioration of wildlife habitat, including riparian habitat.

Based on the above statements, Alternative A (continuation of present management) would not meet the protective mandates of federal law and BLM policy regarding Sensitive animal species in the HRRA, and therefore should not be implemented.

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Conservation of the Bonneville cutthroat trout requires protection against degradation of the watersheds and the streams in which the trout live. Conservation of the least chub and the newly-described dace requires protection against decline of water quantity and quality in the springs that support these fish.

Alternatives B, C and D are similar in terms of providing many of the conservation requirements for these rare fish and their riparian habitat in the HRRA. Similarities are best shown in the comparative summary of Table 2-5 on page 43, and the narrative summary on page 159.

The draft RMP/EIS states that Alternatives B, C and D all provide the following specific protective measures:

* Obtain water rights (Certificates or Diligence Claims) for water sources including wells and springs (page 104). This would help assure water quantity in rare-fish habitat.

* Close all riparian habitat to ORV use (page 134). This would maintain or improve water and habitat quality for rare fish.

* Retain existing oil and gas leasing Category 4 for all least chub habitat (pages 100, 150-151). This would help maintain water quantity and quality for the least chub and newly-described dace.

* Change season of use in the Gandy Allotment by eliminating spring grazing in order to reverse a downward trend of riparian habitat along the Salt Marsh Lake fence (page 23). This would improve water quality in some least chub habitat.

* Fence streams with fair or poor riparian habitat, in order to exclude livestock grazing (pages 23, 134). This would improve habitat quality in streams with known occurrences and potential for transplant of the Bonneville cutthroat trout.

* Fence desert springs riparian habitat (page 134). This would maintain or improve water quality in springs that contain the least chub and the newly-described dace.

* Improve habitat on six streams in the Deep Creek Mountains, projected to result in increases in trout populations in both the short and long term (pages 23, 135).

* Improve habitat for least chub in five locations, expected to result in long-term population increases of this fish (page 135).

We support these proposed actions that appear to be common to Alternatives B, C and D. Elsewhere in the draft RMP/EIS, however, there seem

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20.10 to be some differences between these three Alternatives. For example, on page 23 Alternatives B and C would "fence" riparian habitat at certain springs (least chub locations), whereas Alternative D would "improve" this same habitat. I am not sure what the significance of this difference is, and how it relates to both fencing and habitat improvement called for on pages 134 and 135 (see above).

Another difference involves oil and gas leasing Categories for riparian habitat (in addition to the least-chub springs). As stated on pages 150-151, Alternative C would maintain riparian habitat in Category 1, whereas Alternatives B and D would change this to Category 3 (no surface occupancy).

The RMP/EIS states that fencing to protect riparian habitat within the Deep Creek Mountains, as proposed in Alternatives B, C and D, may not meet VRM Class II standards (page 146). I would urge that this not be used as a reason to deny fencing where needed to protect this crucial habitat for the Bonneville cutthroat trout. The protection of this Sensitive species is of much greater importance than the minor impact to visual resources that might be created by fences. Further, it could be argued that degradation of riparian habitat by domestic livestock grazing could also not meet VRM Class II standards, as stated on page 216 of the draft RMP/EIS.

On the whole, Alternative B appears most favorable for conservation of the rare fish in the HRRA. Alternative D appears to be an acceptable plan that we can support.

The Nature Conservancy is very concerned with the maintenance of rare plants and animals in the HRRA. Beyond my written comments in this part of the letter, the Conservancy is also willing to work actively with the House Range Resource Area toward the goal of rare species conservation. Such cooperative work could include information-sharing and actual field assistance -- as you require and as our resources allow.

## Natural Areas

The Conservancy's interest in protection of natural areas centers primarily on those areas with biological themes. We are most interested in the Rockwell Natural Area, the Deep Creek Mountains, Bonneville cutthroat trout locations, and least chub locations. Although the other areas proposed for special designation have obvious geological, historical and recreational values, my comments will not focus on them.

### Rockwell Natural Area

We support ACEC designation for the Rockwell Natural Area, as provided in Alternatives B and D. Initiation of a mineral withdrawal (Alternative B only) would be desirable. The retention of 4750 acres in oil/gas Category 4, and addition of 4880 acres in Category 3 (Alternatives B and D) are good.

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20.11 Year-round closure of the entire 9604-acre Rockwell Natural Area to ORV's (Alternatives B and D) is necessary. I am not sure that this ORV-closure area is mapped correctly on figure 4-2 (page 141); BLM maps of the Rockwell Natural Area show that it is larger than the closure-area shown in the west-central part of the McIntyre Allotment on figure 4-2.

20.12 My major questions involving the Rockwell Natural Area deal with how the BLM interprets the word "Natural", specifically with regard to domestic livestock grazing. This issue arises from the statement on page 37 of the RMP/EIS that "For purposes of analysis, it is assumed that these [Special Management Designation] areas would be managed to prevent any degradation of the resources these special areas are set aside to protect." What are the resources being protected in the present Rockwell Natural Area? What are the objectives for management of the area, especially with regard to grazing? Have such objectives even been developed, owing to the fact that designation as a Class IV Recreation Area was never completed (page 99)?

I ask these questions because the Conservancy is working to build a system of natural areas in Utah where pre-settlement ecological conditions are maintained or restored. The units of this system generally lack domestic livestock grazing. The Rockwell Natural Area could be a valuable addition to this system by protecting certain ecosystems in the absence of grazing. Alternative B contains the option of a future grazing closure for all or part of the Little Sahara Recreation Area/Rockwell Natural Area (pages 16, 146). I would urge that you carry this option into the Final RMP. I believe that ACEC designation would be greatly enhanced if part of the Rockwell Natural Area were ungrazed. This would not necessarily require closing the entire 9600+ acre tract, but only a representative (and manageable) portion, to be determined later.

### Deep Creek Mountains

The Deep Creek Mountains contain possibilities for one or several relatively small Research Natural Areas (RNA's) that would encompass the common Great Basin ecosystems in this range, as well as its more unusual characteristics (such as endemic plants). Although we have not yet had the chance to explore the range for potential RNA's, we would like to keep this option open in the future, regardless of how the Outstanding Natural Area (ONA) designaion proposal is resolved.

20.13 We generally support the ONA proposal, as provided in Alternatives B and D, unless this designation would preclude the possibility of future RNA designation(s). Initiation of a mineral withdrawal (Alternative B only) would be desirable. The accompanying change in oil/gas Categoriza-

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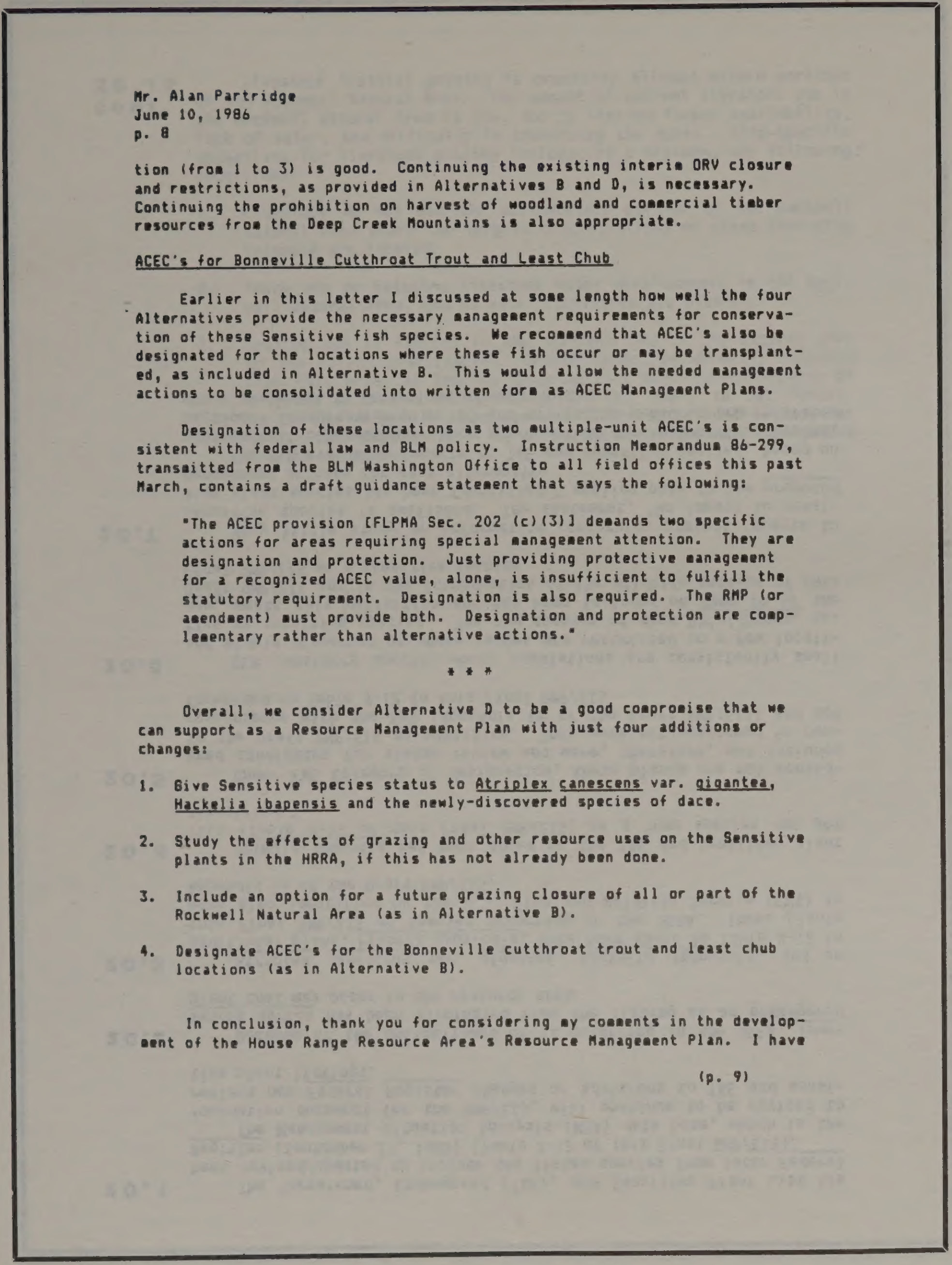

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tion (from 1 to 3) is good. Continuing the existing interim ORV closure and restrictions, as provided in Alternatives B and D, is necessary. Continuing the prohibition on harvest of woodland and commercial timber resources from the Deep Creek Mountains is also appropriate.

ACEC's for Bonneville Cutthroat Trout and Least Chub

Earlier in this letter I discussed at some length how well the four Alternatives provide the necessary management requirements for conservation of these Sensitive fish species. We recommend that ACEC's also be designated for the locations where these fish occur or may be transplanted, as included in Alternative B. This would allow the needed management actions to be consolidated into written form as ACEC Management Plans.

Designation of these locations as two multiple-unit ACEC's is consistent with federal law and BLM policy. Instruction Memorandum 86-299, transmitted from the BLM Washington Office to all field offices this past March, contains a draft guidance statement that says the following:

> "The ACEC provision [FLPMA Sec. 202 (c)(3)] demands two specific actions for areas requiring special management attention. They are designation and protection. Just providing protective management for a recognized ACEC value, alone, is insufficient to fulfill the statutory requirement. Designation is also required. The RMP (or amendment) must provide both. Designation and protection are complementary rather than alternative actions."

* * *

Overall, we consider Alternative D to be a good compromise that we can support as a Resource Management Plan with just four additions or changes:

1. Give Sensitive species status to Atriplex canescens var. gigantea, Hackelia ibapensis and the newly-discovered species of dace.
2. Study the effects of grazing and other resource uses on the Sensitive plants in the HRRA, if this has not already been done.
3. Include an option for a future grazing closure of all or part of the Rockwell Natural Area (as in Alternative B).
4. Designate ACEC's for the Bonneville cutthroat trout and least chub locations (as in Alternative B).

In conclusion, thank you for considering my comments in the development of the House Range Resource Area's Resource Management Plan. I have

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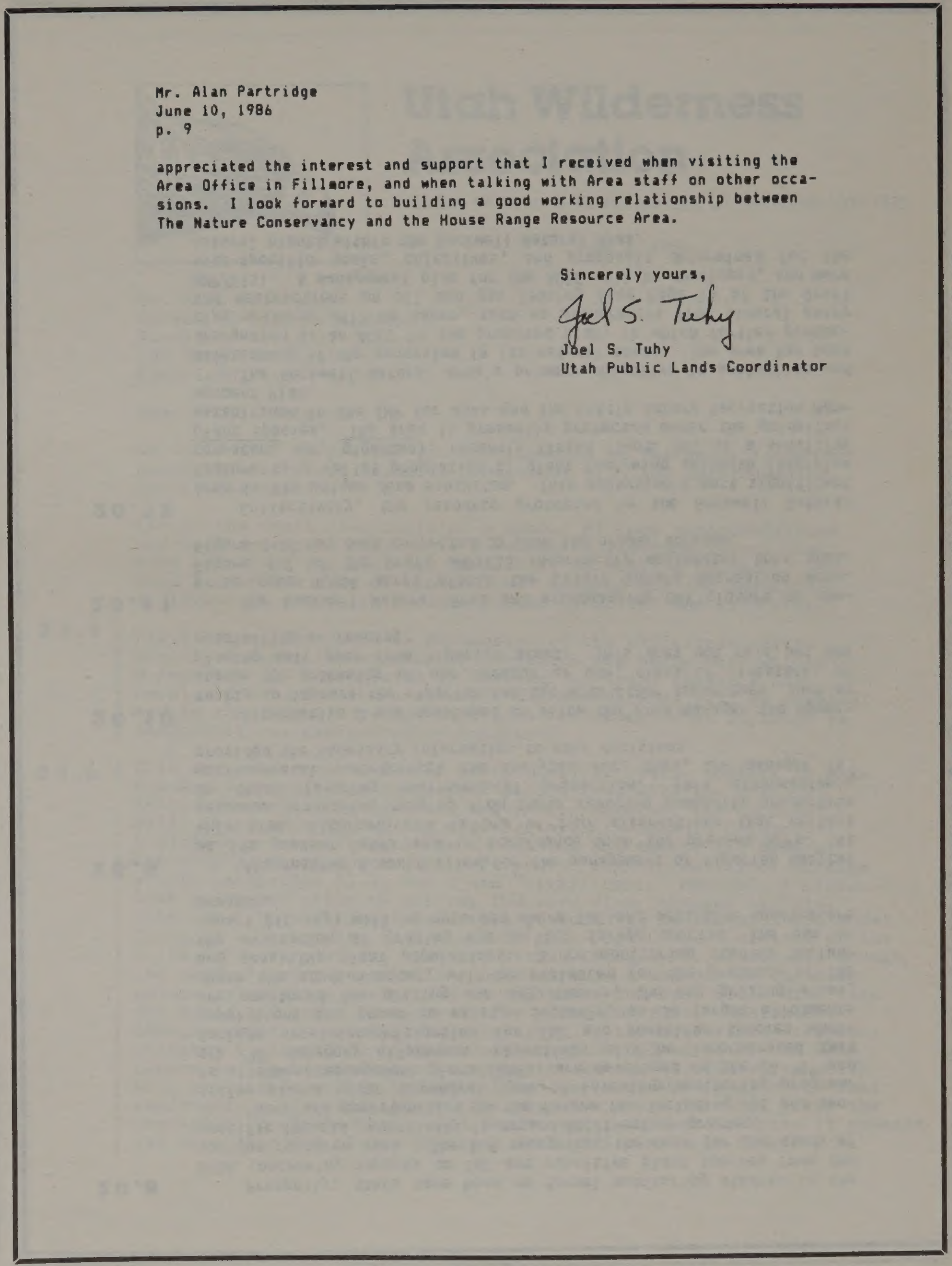

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appreciated the interest and support that I received when visiting the Area Office in Fillmore, and when talking with Area staff on other occasions. I look forward to building a good working relationship between The Nature Conservancy and the House Range Resource Area.

Sincerely yours,

Joel S. Tuhy

Joel S. Tuhy
Utah Public Lands Coordinator

**20.1** The Threatened, Endangered (T&E), and Sensitive Plant List has been revised/updated to include the listed species from later Federal Register (September 27, 1985) (Table 2-12 of this Final RMP/EIS).

The Management Situation Analysis (MSA) data base, which is the foundation document for the RMP/EIS, will continue to be revised to reflect new Federal Register changes or additions to T&E and sensitive plant listings.

**20.2** Because of the unlikelihood of it occurring in the HRRA, Townsendia aprica has been eliminated from the listing as an endangered plant that may occur in the resource area.

**20.3** Atriplex canescens var. gigantea, Hackelia ibapensis, and an additional plant, Frasera gypsicola, have been added to Table 2-12 in this Final RMP/EIS as species occurring in the HRRA. These plants were also identified by the U.S. Fish and Wildlife Service (FWS) in Appendix 15 of the Draft RMP/EIS.

**20.4** Primula domensis has been added to the T&E and sensitive plant list (Table 2-12 of this Final RMP/EIS) as a "new species not yet classified."

**20.5** Under FWS Category 3C designation, these plants are not considered candidates for status review and were, therefore, not included in the Draft RMP/EIS as sensitive. They were not mentioned in correspondence with the FWS (Appendix 15 of the Draft RMP/EIS) and not forwarded in Table 2-12 in this Final RMP/EIS.

**20.6** BLM considers species whose populations are consistently small and widely dispersed or whose ranges are restricted to a few localities as sensitive species. The new species of dace Rhinichthys, sp. nov. meets this definition and has been included on Page 76 of the Draft RMP/EIS and in the Introduction of the Wildlife section of this Final RMP/EIS as a sensitive species.

**20.7** Very little study or information concerning present impacts to sensitive species is available. The statement, "No impact to sensitive plant species has been identified," applies only to the proposed management actions for each alternative.

The BLM evaluates impacts to T&E and sensitive species, based on professional observations. When a project or development is proposed, Section 7 Consultation with FWS and mitigation measures are initiated where an impact is determined or anticipated.

**20.8** Presently, there have been no formal monitoring studies in the HRRA concerning impacts to T&E and sensitive plant species from the various resource uses. The BLM recognizes the need for the study of specific impacts, especially in regard to livestock grazing.

There are opportunities in the future for including T&E and sensitive plants under a general type of inventory/monitoring program. As allotment management plans (AMPs) are developed on the 26 "I" and six "M" category allotments, objectives will be incorporated that include provisions/mitigation for T&E and sensitive species where populations are known to exist. Secondly, as 38 target allotments are monitored for grazing use adjustments, the key grazing areas, where the studies occur, will be evaluated for the presence of T&E and sensitive plant populations. Since monitoring studies include the evaluation of grazing use on key forage species, the use or impact (if any) will be recorded where T&E and sensitive species are present.

**20.9** Alternative A would allow for the management of riparian habitat at its present level and in accordance with the present MFPs. At this time, Alternative A is one of four alternatives that reflect resource tradeoffs, ranging from those favoring commodity production to those favoring environmental protection. This alternative's environmental consequences are analyzed and, thus, the manager is provided the necessary information to make decisions.

**20.10** Alternative D was developed to allow the Area Manager the opportunity to improve the riparian habitat with other techniques, such as change in intensity of use, season of use, class of livestock, or placing salt away from riparian areas. This does not rule out the possibility of fencing.

**20.11** The Rockwell Natural Area and accompanying ORV closure do comprise some 9,604 acres within the Little Sahara Recreation Area. Figure 4-2 of the Draft RMP/EIS incorrectly delineates this area. Figure 2-17 has been corrected to show the proper acreage.

**20.12** Collectively, the resource protected in the Rockwell Natural Area is its unique dune ecosystem. This ecosystem's most significant feature is a relict population of giant four-wing saltbush (Atriplex canescens var. gigantea), recently listed (Sept. 85) as a sensitive plant species. The area is presently protected under the guidelines established in the IMP for WSAs and the Little Sahara Recreation Management Plan.

The Rockwell Natural Area's primary objective is protection and maintenance of the ecosystem in its natural state. The area has been designated as an ACEC in the proposed plan, in which further protective measures will be taken, such as withdrawals from mineral entry and restrictions on oil and gas leasing (see Page 15 of the Draft RMP/EIS). A management plan for the ACEC will be developed, and more site-specific goals, objectives, and proposals determined for the natural plants within the Rockwell Natural Area.

**20.12 cont.** Livestock (cattle) grazing is presently allowed within portions of the Rockwell Natural Area. The amount of current livestock use in the Rockwell Natural Area is low, due to limited forage availability, lack of water, and difficulty in traversing the dunes. Site-specific objectives for livestock grazing include, as a minimum, the following provisions:

1. Livestock do not use the southwestern portion of the Rockwell Natural Area where the largest concentrations of giant four-wing saltbush are located.
2. There are no existing livestock water developments in the Rockwell Natural Area, and no water facilities are planned.
3. Grazing use is limited to the northern end of the natural area to the extent practicable. Cattle cannot be directly excluded from this area, as fencing opportunities are limited because of drifting sand and the tendency for ORV users to cut fences. Monitoring of both grazing use and ORV trespass in this area has been established and will be strengthened as the ACEC management plan is developed.

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**Utah Wilderness Association**

455 East 400 South B-40/Salt Lake City, UT 84111/(801) 359-1337

June 6, 1986

Mr. Alan Partridge
Bureau of Land Management
Richfield District Office
150 East 900 North
Richfield, Utah 84701

Dear Mr. Partridge:

We would like to provide you our comments on the House Range Resource Area draft Resource Management Plan and Environmental Impact Statement.

Though the draft plan contains a number of good recommendations and does appear to respond to a number of resource issues that have arisen in the last two decades, it is still a document, and thus, a resource area of public land managed for and dominated by livestock interests and management direction and allocation.

**21.1** First, we assume there is no mention of the wilderness review process because the wilderness decisions are being made within a separate EIS ( statewide ). However, we still remain a bit perplexed as to how the unsuitable recommendations will be managed? And in the longer term how will areas recommended as suitable be managed if not designated by Congress?

**21.2** With respect to minerals the plan, at first blush, appears to make headway in equalizing management allocations with the public's interest's versus the minerals interests. However, the document still notes that 61% of the planning area is open to Category 1 ( minimum or no restrictions on leasing and access for mineral activity ). Furthermore, Table 2-5 notes that increases of acreage within Categories 2, 3, and 4 are "significant." However, a closer look is needed prior to selling the very minor changes as "significant." No additional lands are proposed to be administered under Category 4. According to Table 3-11 only 59,190 acres of land on the 2,131,435 acre planning area are within Category 4. Ironically enough, the region's most remarkable mountain range ( and one of the most unique island-type ecosystems in the west--the Deep Creek Mts.--are not protected under Category 4. The plan admits no substantive changes would occur within the Category 3, the no surface occupancy category ( except the addition of almost 31,000 acres of the Deep Creeks ). The biggest changes appear to be the 49,000+ acres which were previously within Category 1 and now moved to Category 2. That represents a tiny fraction of the resource area. In fact, given the construction of the charts and the acreages in each Category it appears far more than 61% of the resoruce area will remain in Category 1.

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**21.2 cont.** Thus the plan appears to overstate, dramatically, the proposed changes in oil/gas leasing categories. There certainly are changes and they are, in some instances, meaningful changes. But for the sake of land management/allocation and public decision making any discussion of these changes ought to be reflected accurately. Incredibly enough the plan does note (page 151 ) Alt. B is "more restrictive" than the present management scenario by noting oil and gas leasing would be more restricitve on 4% of the planning area by placing this acreage within Categories 2 and 3! Hardly the 61% figure! And hardly more restrictive--4% is virtually non-existant in terms of actually restricting oil and gas leasing or eventual impacts due to exploration work.

**21.3** The EIS and RMP also fail to adequately discuss the impacts of energy development upon other resources. For example, there is no discussion of how energy development with few restrictions on over 90% of the resource area will impact antelope habitat or the critical elk habitat on the planning area. The same holds true for bighorn sheep or the more elusive mt. lion. There appears to be no discussion of how various recreation opportunities will be impacted by such development. If the the answer to these concerns is that because there is likely to be few impacts to such resources due to low oil and gas potential or minimum drilling demands ( or even the old argument that only 10% of the wells are ever producers ) then the assumptions to leave upwards of 90% of the resource area in Category 1 must be challenged.

There is an implicit assumption in the plan that the only wildlife areas needing protection from complete oil and gas development is critical winter range. That assumes all species have no habitat restrictions at other times of the year. That is, as you well know, an incorrect assumption. Water, grazing activity, recreational activity, all play important roles in restricting completely free movement of many wildlife species, particularly ungulates in habitats which are very marginal. In this resource area due to grazing pressure and water limitations wildlife distributions are severely limited ( the plan notes much of the most important wildlife habitat is in static and poor condition ). Thus the impacts of energy development on and off critical habitat will be far greater than predicted due to the poor condition of the existing habitat. On this basis alone the critical winter and summer ranges of elk, deer, antelope, bighorn sheep and wild horses should be placed in a Category 3 situation.

**21.4** Because there is no justification to maximize oil and gas opportunities on the planning area it is not important to simply leave most of the planning area open to minimum restrictions. Given this and the rationale of the above set of arguments we would suggest a bit of a different approach. Using Table 3-11 and the amendments noted in Table 4-2 we would suggest all wildlife habitat now in Category 2 be moved to Categroy 3 to assure maximum protection from indiscriminate oil and gas activity. In other words all closures for specific purposes would be within Category 3 and 4. This should include the addition of the Fish Springs Mts. Their biological

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**21.4 cont.** value and importance is widely recognized and has been noted throughout the wilderness review, for example. We presume that is why it is noted in this document ( the same holds true for the Swasey Mt. region and Deep Creek Mts. ). However, it is on the basis of the biological values and the extremely rugged nature of the range that we suggest it be placed in the oil and gas category of no lease. The wilderness review process notes it has a very low potential for oil or natural gas and that less than 10% of the range is covered with pre-FLPMA leases. Thus the probability of impacting either an economic base or a potential resource is exceedingly low. It would also be consistent with the plan itself to put the area in Category 4 as this has been done on the Rockwell, Swasey and Deep Creek areas. The biological values of the area, the sensitivity of the soil resource and the low resource potential dictate a Category 4 response.

**21.5** Along the same lines we strenuously urge the BLM to upgrade the Deep Creek oil and gas category from a 3 to a 4! Of all areas in the planning area the Deeps deserve at least the most stringent oil and gas preservation. Certainly they are equal to Rockwell and Swasey in environmental interest and sensitivity. Certainly the oil and gas potential is absolutely minimum and the impact on an economical resource is non-existant. In this instance and the above examples BLM has a responsibility to highlight and manage for these sensitive and unique resources. If not, management/allocation of the west desert and the House Range Resource Area becomes a blur dictated not by a pro-active tests to what should be on the ground but by a reactive test as to what might be proposed.

**21.6** The same holds true for hardrock mineral activities on the resource area. The hardrock mining regs certainly allow the BLM considerable discretion with respect to development scenarios. It is imperative the same areas restricted from oil and gas activity be equally protected from locatable mineral activity. This would include habitats for threatened and endangered species, including potential habitats. And it should include habitats for species now classified as sensitive and awaiting study and listing. If the BLM believes it cannot assure preservation of species or these unique habitats from mineral activity using the discretion granted BLM under the mineral laws/regulations the Richifeld District has an obligation to initiate withdrawal actions on these areas.

The primary highlight of the RMP is the recognition and designation of numerous ACECs and special areas. Even as much as the grazing issue nationwide, the failure to acknowledge and preserve special areas and ACECs has plagued BLM planning since FLPMA. This plan has, at least, made a significant effort in ameliorating that failure. You should be commended for the positive action taken!

**21.7** Yet, it is not complete. Both the Fish Spring Mts. and the Swasey Mts. should also be designated as ACECs. On the Swasey Mts. we find bristlecone pine, limber pine, doug-fir and even an occasional ponderosa pine grove. A number of caves are found on the mountain

**21.7 cont.** and some of the most significant fossil beds have been discovered on the area.

**21.8** The Fish Springs have considerable importance due to the unique geological forces at work in creating the range. It contains some of the most isolated terrain in western Utah and some of the most rugged peaks in the Great Basin. At the base of these peaks are unusually large parklands and basins headed by steep castle-like cliffs. At the base of the range sits the Fish Springs National Wildlife Refuge which enhances the wildlife potential of the mountain range.

Clearly, both areas should be considered as ACECs and/or natural areas. And in all cases all special areas and ACECs should be classified as withdrawn from hardrock mineral entry and placed in oil and gas leasing Categories 3 and 4. Without such protection the very purpose of allocation is lost. These special designations should not depend upon management based upon reacting to specific proposals for some kind of development. Clearly, the intent must be to dictate a strict management scenario.

Grazing activities within these areas must either be eliminated or restricted so as to preclude any potential of destroying the various special and natural values harbored by these areas. Obviously the same holds true for ORV use. In all cases these areas should be closed to ORV use to prevent any potential or future damage to the resource base. In all instances these restrictions will impact very little terrain and have little impact on management of the resource area simply because the acreages involved are relatively small, grazed by domestic livestock very lightly ( see Wilderness EIS and draft RMP ), host generally very low mineral potential and receive minimal ORV use.

With respect to ORV use the House Range Resource Area it has some
of the most diverse and interesting ORV potential in the west desert.
**21.9** Though, in general, we fully support the proposed restrictions and
closures outlined in the plan we do have a number of questions. First,
**21.10** in areas classified as "restricted" we see no indication of what
that means. Is it a restriction on seasonal use? Or a restriction on
staying on roads or trails? It is unclear as to whether the Rockwell
**21.11** Natural Area is simply restricted or closed? And it seems a bit
curious as to why the Swasey Mts. and a large portion of the Deep
Creeks are simply restricted rather than closed? Why?From a management
standpoint if the lower reaches of the Deeps are open to ORV use it
simply means the upper reaches are open, as well. Once ORV users start
up a trail it is not likely they will be stopped. Therefore, it is
far wiser to simply close the entire region to ORV use with the exception
of legitimate roads. The same holds true for the Swasey Mts. In
the case of the Swasey Mts. the entire area should be closed to ORVuse.

The reasons are obvious.The Swasey's present a classic non-motorized type recreation environment and harbor unique environments which are sensitive to disturbance associated with motorized access. This is recognized throughout the allocations made in the draft RMP as well as the proposed suitable wilderness decision in the draft wilderness EIS. And finally, since there are no trails in the area anyway it seems that a restricted motorized access is deceptive. Of course, the established ways on the south end of the range would remain open. However, these can be noted without only restricting motorized use. In other words, the unroaded portion of the mountain can be closed ( with no management impact or loss of ORV opportunities ) while allowing established motorized use on the roadways.

**21.12** Obviously, the same logic should prevail for the Fish Spring Mts. This range is equally rugged and has no motorized access potential, thus it seems senseless to leave it open to vehicle use. Furthermore, the range is targeted for bighorn sheep reintroductions which would require complete closure to ORV use. The steepness of the range, isolation and lack of ORV opportunities combined with the bighorn sheep potential and natural setting should dictate an ORV closure.

**21.13** Also, it is not clear what ORV restrictions are placed on the remaining ACECs and special management areas. Are they closed to ORV use or restricted? Again, the same questions hold for these areas with respect to restrictions? Are they seasonal, locational etc.?

One of the goals of RMPs is to provide a management, allocation and use array. Alt. D does restrict ORV use on a number of allotments, but only actually closes to ORV use the core of the Deep Creek Mts. With all of the ORV use which is allowed on the resource area and is associated with the Sahara Sand Dunes and with the tremendous isolation and natural ruggedness on the eastern mountain ranges it seems these areas should be closed to ORV use. This would still leave the vast majority of the resource area open to ORV use while closing the areas which dictate closures given the environmental constraints.

With these closures to ORV use in addition to the restrictions and single closure proposed in the RMP an otherwise timid but good beginning to ORV restrcitions will be vastly improved and fully supported by the Utah Wilderness Assocation. If improvements are not made it seems to us the approach taken is simply to conservative and fails to provide the needed array of uses and meet the uses and environmental constraints.

LIVESTOCK GRAZING/WILDLIFE

21.14 One of the largest inequities in the entire RMP is the allocation of forage for livestock and wildlife. Page 62 notes 134,154 AUMs of forage is the estimated carrying capacity for livestock. This leaves 15,016 AUMs available for wildlife and 2,904 AUMs for wild horses. Such discrepancies in forage allocation do not adequately meet the mandates of multiple use management. Several factors may contribute to this inequity (For example, lack of suitable habitat for certain wildlife species) and these factors should be clearly spelled out in the document. Without this explanation, the EIS is inadequate in its analysis of the affected environment and environmental consequences. However, all these "other" factors cannot totally explain the 9:1 ratio which favors livestock forage.

Forage Demand:

The draft EIS clearly notes the lack of demand for increased forage production in the House Range Resource Area. Page 63 notes the past average use as about 98,000 AUMs of livestock forage when the licensed use is actually over 145,000 AUMs. In addition, page 114 notes Millard County has only 11% of its income derived from agriculture and Juab County has only 3 % of its income derived from agriculture. Of course, only a small percentage of the agricultural interests in both of these counties would depend on the House Range Resource Area for livestock forage.

21.15 Simply put, there is no reason to allocate "paper" AUMs above and beyond what the past use has been. There is no demand for the forage and all economic indications point to a decrease in forage demand.

Array of Alternatives/NEPA:

One of the biggest problems with the EIS is its inadequate array of alternatives in the livestock forage allocation. Every single alternative allocates more forage to livestock than has been used in the past. This over enthusiasm for livestock forage production, beyond demand, is not justifiable. Three of the four alternatives, including the preferred, initially allocate livestock forage beyond the indicated carrying capacity. This shows a lack of compliance with NEPA in considering an adequate array of alternatives.

21.16 Another problem with the array of alternatives is the skewed manner in which forage is allocated. The EIS notes about 150,000 AUMs of forage is available for wildlife, livestock and wild horses (see page 62). However, the best wildlife alternative, alt. B, allocates over 75% of the forage to livestock (see page 132). BLM may attempt to justify this inequity by explaining there is not a need (demand) for increased wildlife AUMs since the present use of the non-competative wildlife forage is less than the amount allocated (see page 62). However, BLM fully justifies the excess allocation of livestock forage well over the five year average use in every alternative! In fact, the initial allocation to livestock ranges from from about 20,000 to nearly 50,000 AUMs over the five year average use.

If there is any justification for this array of alternatives, it is not found within the EIS. If sound reasons exist for the array of alternatives, they are not articulated, making the discussion of the array inadequate because of this possible omission.

One of the most glaring problems with the EIS is the lack clarity and analysis presented for the
various alternatives. This is a particular concern when looking at livestock and wildlife. Page 134
notes that alternative B would, "provide more water sources and eliminate sheep spring grazing."
21.17 This is to benefit antelope. It also states, "With the developemnt of water sources and elimination of
domestic sheep grazing above 7,000 feet in elevation, it is expected that bighorn sheep numbers
would increase under this alternative." However, there are no figures which show when and where
spring sheep use will be curtailed. There is no mention elsewhere in the EIS of what allotments
have sheep grazing above 7,000 and how that is to be controlled. Only table 2-3 gives a list of
allotments and AUMs to be reduced. There is no mention of season of use changes or elevation
reductions.

21.18 Furthermore, the same positive wildlife consequences apply to alternative D, the preferred. However, the EIS notes on page 34 alternative D initially allocates livestock forage at active preference (above the carrying capacity and well above past use) with monitoring to determine if reductions are needed. How can alternative D be the same as alternative B for wildlife when the stated goals in Chapter 2 for the two alternatives are different and the management actions are different, if not opposite?

Riparian Habitat:

21.19 One of the better recommendations in the plan is the proposal to protect riparian habitat. The EIS notes on page 134 that desert springs will be fenced. Does this include all springs or just those in poor or fair condition? The same page also notes that all streams in poor or fair condition will be fenced. The BLM is to be commended for taking this step. It is critical in desert environments that riparian habitat be maintained in good or excellent condition for wildlife, recreation, watershed and other values. BLM may find it easier, rather than fencing entire streams, to close off the canyon itself to grazing. This would be easier than fencing along both sides of a long stream and would cause little or no loss of forage since many streams are situated in deep canyons where the steep slopes are considered unsuitable for livestock grazing.

21.20 Rather than classing riparian areas for catergory 2 leasing, they should all be no lease (category 4) or no-surface occupancy (catergory 3). Any surface occupnacy, regardless of the stipulations, in perennial water supplies causes severe watershed damage. This would be consistent with the adjacent Warm Springs Resource Area which recommends category 3 for leasing. In addition, all riparian areas should be withdrawn from mineral entry because of their fragile nature.

Range Condition:

At first glance the range condition and trend for the House Range Resource Area seems to be better than many other areas. Nearly one million acres are in goood condition and almost 150,000 acres are in excellent condition. However, a closer inspection reveals concerns with spoecific allotments and the determination of range condtion.

More of the excellent condition range, when considering percent of rangelands, is found (7.3% v. 4.1 %) in the Topaz Planning Unit in the West Desert than is found in the Tintic Unit. Ironically, the same is true for the poor condition range (6.9% v. 1.9%). In fact, the Topaz Planning Unit has a much higher percentage of poor condition range than does the Tintic Planning Unit. The explanation may well be the Topaz Unit has far more range unutilized by livestock due to the rough topography and distance from water. In reality, much more of this land should be classified as unsuitable for domestic stock grazing due to these factors. This will only increase as sheep allotments are converted to cattle allotments. This spotty use pattern of allotments also contributes to the high percentage of the Topaz unit in poor condition. Accessible and desirable areas are over-utilized by livestock.

21.21 A factor which casts some doubt upon the high amount of range in the the better conditions is the
chart on page 51. It shows that the plants with the highest composition, next to shadscale, are big
sagebrush (generally an increaser), cheatgrass (an invader) and little rabbit brush (an
21.22 increaser). None of these are considered particualry high value species and reflect a range in fair
to poor condition when they are abundent (see page 175). Furthermore, the categorization for
range plants (page 175) lists some species which are not usually considered as intermediate as
desirable. These species (including Salcornia spp., Suadea app., Phlox spp., Salsola kali, Sarcobatus
vermiculatus, Chrysothamnus nauseosus and Chrysothamnus viscidiflorus) are not intermediate in
desirability. They are generally used only under extreme conditions by livestock. Cheatgrass,
although used, is not available most of the year. Listing these low value species as intermediate
gives a false perception of the condtion of the range.

21.23 The biggest problems with range condition are the figures listed for wildlife in the EIS. Most of the critical summer and winter habitat for both elk and deer are in poor condition (page 64). Why is wildlife habitat in such poor condition? Is it because management has been directed at livestock and wildlife has been a second class resource? This problem needs an adequate response.

Allotment Concerns

We have listed some problems, questions and concerns with some specific allotments although they are not all inclusive.

21.24 Antelope -- This allotment is listed as categroy M (maintain) even though it has a nearly half the area listed in fair or poor condition. Other allotments (for example, Callao Bench) have a much better percentage of the allotment in good and excellent condition are listed as category I (Improve). This desert area also has a season of use problem with spring and summer cattle use.

Callao Bench -- This allotment is listed as an I category allotment and it should be so listed. The chart on page 187 does not, in our judgement, accurately reflect the range condition of this allotment. We have found portions of the allotment in poor condition with areas dominated by halogeton and cheatgrass. This condition is partly due to the fact the area has seen considerable past use in the spring and summer by cattle (personal observations) in an area suited for winter grazing. The season of use should be shortened because it now extends until the end of May, well into the critical growth stages of the cold season plants.

East Fish -- This allotment should be listed as category I. It has a considerable season of use problem (spring and summer cattle) in an area suited for winter grazing.

Mountain -- All of this allotment is listed in fair condition according to appendix 8, therefore the I category, as BLM recommends, is needed. However, the upper portions of Tom's and Indian Farm Creeks (two riparian stream zones which occur within this allotment) are listed in good condition (page 83). Why is there this discrepancy? Also, any grazing in the Deep Creek Mountains needs careful management because of the outstanding biological values.

Partoun -- This allotment has a season of use problem (cattle spring and summer). Also more use takes place than licensed preference (see page 183)! Since most of the allotment is in fair to poor condition, it should be listed as category I.

Tatow/1000 Peaks -- these two allotments are mostly in fair condition. BLM has listed them as category I, which is appropriate. However, appendix 5 shows cattle use for these two allotments yet appendix 6 shows no cattle use. Which is correct?

Tule Valley -- This entire allotment's condition is listed as "other." What is the condition? The season of use is spring and summer for cattle on an area suited for winter grazing. This allotment should be listed as category I.

Reintroductions:

21.25 On of the positive parts of the EIS is the approval for reintroduction of desert bighorn sheep into the Fish Springs Range (see figure 3-8). What about Swasey Moutnain in the House range? Is it historic bighorn range? Would BLM allow reintroduction into this area? Are other areas suitable for reintroduction?

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Summary:

21.26 Overall, alternative B best resolves all multiple use concerns. It allows for increases in wildlife allocations and numbers which are, at present, much below those of domestic livestock. BLM has presented information in the EIS which justifies the proposed adjustments without further study. Even if this alternative were adopted, the forage allocated to livestock would be well above what has been the past average use and would be several times greater than the forage allocated to wildlife.

Thanks very much and we do look forward to hearing from you in the near future. Please keep us posted on this RMP.

Sincerely,

Gary Macfarlane

| | |
|---|---|
| Dick Carter | Gary Macfarlane |
| Coordinator | Natural Resource Specialist |

**21.1** The Utah BLM Statewide Wilderness EIS addresses how areas will be managed if not designated wilderness by Congress. The current land use plans (i.e., Management Framework Plans [MFP] and/or RMPs) would determine land management direction.

In the interim until Congress makes a final determination on wilderness, all WSAs, recommended as suitable or unsuitable, will be managed under the IMP for Lands Under Wilderness Review.

**21.2** Refer to Comment-Response 13.3.

**21.3** The critical winter ranges are not the only areas on which wildlife depend, but they appear to be a limiting one for deer in the area. We are well aware of antelope critical need in the spring for forbs; however, no specific areas have been identified as critical. Wild horse needs on critical range can generally be protected by seasonal stipulations in leasing Category 2.

**21.4** Category 2 allows leasing with standard and special stipulations to protect resource values. Under most conditions, Category 2 stipulations adequately protect biological values. However, the Fish Springs, Swasey, and Deep Creek Mountains and Rockwell are WSAs and receive even more stringent protection under the BLM Wilderness IMP. Since December 1982, all WSAs have been suspended from leasing for the duration of the wilderness review process.

**21.5** Since December 1982, all WSAs have been suspended from leasing for the duration of the wilderness review process. Should the Deep Creek Mountains be designated wilderness, the no leasing designation would continue. Should the area not be designated wilderness, a Category 3 designation would provide the desired surface protection required.

**21.6** IMP protects WSA areas from new mineral development. Special designations would provide additional more stringent requirements.

**21.7** The Fish Spring and Swasey Mountains are WSAs currently protected under the BLM Wilderness IMP. Should special management protection, in addition to IMP, be considered necessary, these areas may be nominated as ACECs. Nomination of possible ACECs in the HRRA should include the following: name of area, location (legal descriptions or attach map), important natural features or safety hazards, threats of damage to the feature, and type of management recommended (see Federal Register, Vol. 50, No. 84, May 1, 1985, p. 18577).

**21.8** See Comment Response 21.4.

**21.9** No lands are classified as "restricted." Lands are classified as "open," "limited," or "closed" to ORV use. The open and closed classifications are self explanatory. The limited classification means that the lands may be used by vehicles but there are some limitations on vehicular use whether it be the season of use, limitation of use to existing roads, trails, washes, etc.

The restrictions within areas designated as "limited" within the various planning alternatives are outlined in Chapter 2, Page 25 of the Draft RMP/EIS. Chapter 4 of the Draft RMP/EIS (Environmental Consequences, Pages 137-149) also describes the restrictions within the "limited" category and the anticipated environmental consequences of the restrictions.

**21.10** As stated in Chapter 3, Page 86, under the heading "Off-Road Vehicles" in the Draft RMP/EIS, the Rockwell Natural Area (9,604 acres) within Little Sahara is closed to ORVs to protect natural values. Figure 3-11 on Page 87 of the Draft RMP/EIS, however, depicts the Rockwell Natural Area as limited. The Errata section for the Draft RMP/EIS and Figure 2-14 of this Final RMP/EIS point out this correction to the map.

**21.11** Almost the entire portion of the Deep Creek Mountain Range, administered by the Richfield District of the BLM, is closed to ORVs (30,700 acres). ORV use on the adjoining benchlands is limited to existing roads and trails (64,969 acres). There are no areas open to unrestricted vehicular use.

Steep terrain and heavy vegetation limit ORV activity within the Deep Creek and Swasey Mountain ranges. Proposed ORV classifications (open, limited, and closed) are based on the current and anticipated ORV activity and the potential for impacts to the land. The proposed classifications and environmental consequences are analyzed in Chapter 4 of the Draft RMP/EIS.

**21.12** No current significant impacts are associated with ORVs within the Fish Springs Mountain Range. The range has no motorized access potential due to the ruggedness of the terrain. No site-specific potential impacts associated with ORVs have been identified by our resource specialists, management, other agencies, or the public which require the implementation of ORV closures.

**21.13** Specific ACEC protective stipulations have not been determined at this time. After the RMP planning process, detailed site-specific ACEC management plans will be developed to determine restrictions and closures for ORV use in ACECs.

**21.14** As stated on Pages 61 and 62 (Table 3-3) of the Draft RMP/EIS, there is currently a demand of 12,289 AUMs of forage to sustain big game at existing population levels. Based on estimates from the RVIMS range survey, 15,016 AUMs of noncompetitive forage (in excess of the 134,154 AUMs of competitive forage) is available to big game that livestock do not use. The problem is that not all of this noncompetitive forage is in those areas (grazing allotments) considered important or crucial as big game habitat.

In order to compensate for this problem, the BLM estimated the amounts of competitive and noncompetitive forage available in each grazing allotment. Where enough noncompetitive forage was available to provide for current big game populations, that amount was allocated to big game in each allotment. Where there was not any or enough noncompetitive forage available to big game, the necessary amount to sustain present populations was allocated out of livestock/wild horse competitive forage. This was done for alternatives C and D. The necessary forage to sustain objective big game populations was allocated using the process for Alternative B.

Using this allocation process, an equitable distribution of forage was allotted for all primary grazers in each allotment (by animal, season, and forage types available).

The wildlife need, not the ratio for livestock versus wildlife, was used in selecting the proposed plan.

**21.15** As outlined on Page 17 of the Draft RMP/EIS, the initial forage allocations for livestock range from a low of 117,214 AUMs in Alternative B to 136,131 AUMs in Alternative C and 145,334 AUMs in alternatives A and D. This represents an adequate array of forage allocation levels to meet both the criteria outlined in NEPA and the BLM planning regulations/guidelines.

Although the initial allocation levels in the proposed alternatives presently exceed the current demand (98,224 AUMs), the BLM cannot set forage limits based on a demand that is affected by changing market conditions. The BLM allocates forage resources based on estimates of forage availability, production, and suitability for the grazing animals in each allotment. These allocated use estimates must be supported by monitoring data (vegetation studies).

The No Action Alternative and the proposed plan (Alternative D) initially propose allocation levels (at existing preference) that may exceed the estimated carrying capacity for livestock on 38 allotments. However, two factors must be taken into consideration:

(1) The initial allocation levels will be adjusted to carrying capacity over the short term (within 5 years) as indicated through monitoring studies. Many of these adjustments will occur within 1-2 years of Final Plan completion as mutual grazing agreements are entered into between the BLM and affected livestock operators (refer to Negotiated Grazing Agreements in Vegetation and Range section of this Final RMP/EIS).

**21.15 cont.** In regard to livestock, the BLM will make proper adjustments to grazing allotments when acceptable data becomes available to support those adjustments (CFR 4110.3-3). At present, insufficient data is available, and additional data will be collected on 38 allotments within a 5-year period of final plan completion. During this period, the BLM shall take every opportunity to consult with the permittees of these allotments and enter into mutual agreements where initial reductions in allotted use are indicated.

(2) Intensive management (32 allotments) and forage improvement opportunities (i.e., 65,000 acres of vegetation treatment on primarily nine allotments) will be implemented over the long term (5 to 20 years).

**21.16** See Comment Response 21.14.

**21.17** Chapter 3 discussion of the affected environment for antelope should have pointed out that there are at least two limiting habitat factors. They are poor quality and amount of spring forage and water. By eliminating spring sheep grazing and increasing water availability, antelope would increase in numbers. Production of spring forage would remain limited, due to the limited precipitation. Thus, antelope numbers would not reach UDWR's long-term management goal.

Under bighorn sheep in Alternative B, domestic sheep grazing would be eliminated above 7,000 feet on the Thousand Peaks and Partoun allotments. Herding domestic sheep is one method that may be used to control grazing. Table 2-1 on Page 19 of the Draft RMP/EIS identifies those allotments where change in season of use could occur.

**21.18** Referring to Page 43 (Table 2-5) and Page 133 of the Draft RMP/EIS, Alternative D for mule deer, elk, and antelope should be corrected to read as follows:

> "The initial forage allocations would be the same as Alternative A. Habitat improvements would be the same as those proposed for Alternative B."
>
> "It should be recognized that as livestock monitoring and adjustments are made and improvement practices implemented over the long term, big game populations and allocations would be expected to increase."

**21.19** Under Alternative B on Page 134 of the Draft RMP/EIS, those streams with riparian habitat in poor or fair condition would be fenced to exclude livestock grazing. Desert springs and wetland habitat (identified in Table 3-8 on Page 84 of the Draft RMP/EIS) that have an unknown condition would be inventoried. All desert spring and wetland habitat presently in fair or poor condition would be fenced to exclude livestock grazing under alternatives B and C. Under Alternative D, the Area Manager will determine how to improve the fair and poor condition after further study of the areas.

**21.20** Under Alternative B, all riparian habitat would be placed under Category 3 (Table 2-1, Page 23 in the Draft RMP/EIS). On Page 134 of the Draft RMP/EIS under Alternative B for riparian and wetland habitat, the third sentence should read, "All riparian habitat would be placed in oil and gas leasing Category 3 and be closed to ORV use.

**21.21** Figure 3-1 on Page 51 of the Draft RMP/EIS displays the relative abundance of plant species found on 333 transects throughout the resource area. The relative abundance of these species does not reflect or portray an assessment of range condition.

The three species mentioned (big sagebrush, cheatgrass, and rabbitbrush) are three of the most prolific and commonly encountered plant species found in the Great Basin of the Western United States. They are highly adaptable species that fill a variety of niches and successional stages of western rangelands. The value of these species also cannot be overlooked. Big sagebrush/rabbitbrush are important forage and cover types for a variety of game birds/small mammals, as well as valuable winter forage for deer. Cheatgrass often serves as a successional role in providing watershed cover and is a very valuable source of winter/spring livestock forage.

**21.22** The plants referred to on Page 175 of the Draft RMP/EIS (Salicornia, Suadea, Phlox, Salsola, Sarcobatus, and both species of Chrysothamnus) may vary substantially as to their desirability for livestock, especially under varying spring conditions. Some of these species may indeed not be considered as true "intermediates" as far as overall forage diets are concerned. However, this is not important as the "proper use" factors assigned to these species are extremely low (averaging 5 percent) and, therefore, they figure very little into the overall forage estimates determined in the range survey.

**21.23** As identified on Table 3-6 beginning on Page 71 of the Draft RMP/EIS, critical deer and elk habitat is considered to be in fair or poor condition due to the lack of adequate water or due to historic heavy use by wildlife and livestock. Under alternatives B and D, these critical areas would be reseeded and improved. In the proposed action, wildlife is given first priority allocation to current population numbers.

**21.24** The following responses pertain to each of the allotments mentioned in the comment:

Antelope: In the M I C selective categorization process, range condition, although important, may not be the major selection criteria for an "I" allotment. Often, production capability is a major resource controlling or limiting factor, as is the case with a large portion of the Antelope Allotment. The resource production potential is low or very limited on this allotment, whereas the Callao Bench has more rangeland with a greater potential for improvement. In regard to spring-summer cattle use on the Antelope Allotment, RVIMS range studies indicate that there is suitable water and perennial grass forage along the higher benches and mountains to support a spring-summer cattle herd. Additionally, only 99 AUMs in total forage preference is allocated to cattle.

**21.24 cont.** There does appear to be a present overallocation of forage for sheep on this allotment, which will be evaluated through monitoring and adjusted as necessary (see Page 35, Table 2-4, of the Draft RMP/EIS).

Callao Bench: This allotment has historically had a season of use problem with cattle. The grazing season has already been shortened from July 15 to May 31 (shortened 45 days). More intensive management is needed, especially in regard to the seasonal regulation of livestock. Subsequently, the allotment has been selected as a high priority for development of an Allotment Management Plan (AMP) (see Figure 2-2 in the Draft RMP/EIS).

East Fish Spring: A season of use grazing problem is not used as the sole criteria for placing an allotment in the "I" category. However, this problem has been identified and is proposed to be evaluated and corrected as necessary (see Page 19 of the Draft RMP/EIS).

Mountain: There is not a true discrepancy in condition ratings for this allotment. Three perennial streams are located within the Mountain Allotment (Basin, Indian Farm, and Tom's creeks). Presently, no preliminary data is available regarding the riparian habitat condition of Basin Creek. Preliminary data for Indian Farm Creek indicates good condition/static trend, but major portions of this stream are inaccessible to livestock because of steep canyons. Initial data for Tom's Creek shows the lower, more heavily used, portions in poor condition/static trend and the upper, less accessible, portions to be in good condition.

The BLM is mandated to protect the biological values on these important stream systems. As proposed in the plan, these streams will be inventoried and appropriate resource protection measures implemented as described on Page 20 of the Draft RMP/EIS.

Partoun: The active preference and actual use information presented in Appendix 6 (page 183 of the Draft RMP/EIS) was incorrect for the Partoun Allotment. It should read as follows: "active preference sheep, 2,194 AUMs; actual use sheep, 1,820 AUMs; active preference cattle, 2,185 AUMs; and actual use cattle, 732 AUMs."

As corrected above, the authorized use on the Partoun Allotment does not exceed active preference. As with the East Fish Springs Allotment, the Partoun Allotment will be evaluated and corrective actions taken to adjust livestock season of use as necessary. This allotment has also been identified as a high priority for AMP development/implementation.

Tatow/Thousand Peaks: Both the Tatow and Thousand Peaks allotments are authorized for dual use (sheep and cattle). Corrections have been updated for these allotments as shown in Appendix 8 of this Final RMP/EIS.

**21.24 cont.** Tule Valley: As described on Page 61 (Table 3-4) of the Draft RMP/EIS, the "other" category represents areas that may be rough and inaccessible, contain sparse vegetation, or are treatment areas that have not been classified. In the case of the Tule Valley Allotment, the area is largely comprised of very sparse salt desert shrub vegetation that has a low resource production potential. This allotment would have normally been categorized as a "C" allotment under the M I C criteria, but it does contain some important riparian spring complexes (Tule Spring) and limited grazing areas that have some potential for resource improvement. Therefore, it was classified as a "M" category allotment. The spring-summer season of use for cattle on this allotment has not had an appreciable impact on forage production because of the low allocated use for livestock (156 AUMs on 14,500 acres).

**21.25** Swasey Mountain has not been inventoried for its suitability as bighorn sheep habitat. Also, UDWR has not identified this area as a high priority area transplant site.

**21.26** Based on an interdisciplinary analysis, Alternative D was selected as the most beneficial for all multiple use concerns. Alternative D, as proposed, would provide the best balance of uses and constraints on uses when considering the integrated management of resources as a whole.

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Alice I. Frell
Lands Director

Rocky Mountain
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June 10, 1986

Mr. Alan Partridge
House Range Resource Area
Bureau of Land Management
150 East 900 North
Richfield, UT 84701

Dear Mr. Partridge:

On behalf of the Rocky Mountain Oil and Gas Association (RMOGA), I would like to offer our comments on the Draft Environmental Impact Statement (DEIS) and proposed Resource Management Plan (RMP) for the House Range Resource Area (HRRA). RMOGA is a trade association representing hundreds of members who account for more than 90% of the oil and gas exploration, production and transportation activities in the Rocky Mountain West. Like so many others associated with the energy industry, RMOGA members are concerned about access to public lands for exploration and development of oil and gas.

RMOGA has several concerns regarding the DEIS and proposed Plan for the HRRA. These concerns are iterated below.

The DEIS states that there are "two general purposes to each alternative: 1) the planning issues must be addressed completely, and 2) the overall management prescriptions which guide the management of all resources including those which are not issue related". However, the DEIS further states on Page

**22.1** 13, "Those lands, resources, and programs not affected by the resolution of any issue would be managed as they are at present". Yet, significant changes have been proposed in the DEIS regarding recreation not associated with ORV use, visual resources, and availability of lands for exploration for and production of energy and mineral resources. It would seem that these changes are unjustified because they were not fully analyzed in accordance with the planning regulations and requirements.

**22.2** The DEIS for the HRRA is severely deficient because it does not adhere to the Draft Fluid Mineral Leasing Guidelines provided in the Supplemental Resource Planning Guidance, a Bureau planning requirement. These guidelines require the BLM to assess the energy potential of the resource area in order to determine what tradeoffs are essential. This information is supposed to be displayed in a

June 10, 1986

Mr. Alan Partridge
House Range Resource Area
Bureau of Land Management

page two

matrix which identifies the potential of the resource area and its relation to access restrictions. Since the DEIS has failed to discuss the mineral potential of the resource area, apparently these decisions were made regarding designation of special management areas without the benefit of geologic data and information. Since those areas proposed for special management are being placed in more restrictive lease categories, some sort of tradeoff analysis and justification for these restrictions, particularly in relation to the mineral potential, should be included in the DEIS.

On Page 151, the BLM states that adjustments in existing oil and gas leasing categories were proposed in response to other program recommendations to add further protection in some areas, maintain existing situations or to ease restrictions to accommodate resource needs. But very few restrictions were eased--there is no evidence of a tradeoff analysis, but rather the implied needs of other resources without regard to access for oil and gas activities. This contention is supported by the fact that there is a 38% drop of lands available for leasing with standard stipulations--under current management 99% of the resource area is available with standard stipulations, whereas the Preferred Alternative makes only 61% of the area available under leasing Category 1.

Considering the dramatic changes in how minerals are affected along with the
fact that the entire HRRA is under oil and gas lease, it would seem that
additional analysis and documentation should have been prepared. It is our
opinion that lack of consideration is due to the fact that the Utah BLM has
erroneously decided that energy resources and required access opportunities do
not qualify for consideration as a planning issue. (This is not to say that
**22.3** energy and mineral resources and required access were not publicly identified.)
The result of such a decision is a document which does not address oil and gas
resources adequately. There is not even a map which indicates where the leasing
categories are applied. With the exception of areas proposed for withdrawal,
the public has no reasonable way in which to determine those areas subject to
standard, seasonal, or no surface occupancy stipulations.

Another example of the inadequacy of the DEIS is reflected in the omission
of energy and minerals in the resource element discussions found in Chapter 4,
Environmental Consequences. This chapter addresses only those impacts
associated with grazing and ORV use because these were the only identified
issues. There is virtually no discussion of possible impacts which could result
**22.4** from energy and mineral activities and associated mitigation measures which
would be applied in sensitive areas to minimize any impacts. Given the climate
today regarding environmental documentation associated with leasing decisions on
public lands, it would seem that impacts resulting from oil and gas activities
as well as impacts on oil and gas activities resulting from other management
decisions should be addressed in the planning documents. It is the BLM's

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June 10, 1986

Mr. Alan Partridge
House Range Resource Area
Bureau of Land Management

page three

**22.4 cont.** responsibility to prepare a defensible planning document which will stand up under challenge. We believe that this document is hardly defensible and we recommend that the BLM revise the final EIS to reflect a more thorough consideration of oil and gas.

**22.5** Another item which must be corrected is the lack of consistency regarding acres available for leasing and under what restrictions. None of the tables included in the DEIS reflect the same acreage. The table indicating changes in lease categories does not coincide with the table indicating how much acreage is available under each category.

In conclusion, RMOGA finds it impossible to support any of the management alternatives, with the possible exception of the No Action Alternative. It is our opinion that the BLM has not adequately determined what tradeoffs should be considered with regard to lost opportunities for oil and gas activities. Furthermore, there is no adequate justification for increasing the acreage in the more restrictive leasing categories. We recommend that the BLM reanalyze the impacts to availability of lands for oil and gas exploration and development activities which will result from the proposed action.

If you would like to discuss our views further, please do not hesitate to contact me. Thank you for this opportunity to comment.

Sincerely,

Alice I. Frell
Public Lands Director

AIF:cw

## Response Letter 22

**22.1** The other changes suggested in the Recreation program are to comply with the FLPMA in applying criteria to areas needing special protection.

**22.2** Refer to Comment Response 13.1.

**22.3** Refer to Comment Response 13.4.

**22.4** We have added more specific information to the Introduction in the Minerals section of this Final RMP/EIS to explain the rationale for the categories proposed and a map showing oil, gas, and geothermal potential.

**22.5** Refer to Comment Response 13.3.

## Comment Letter 23

Randy T. Nielsen
Public Lands Committee
UTAH WILDLIFE FEDERATION

June 9, 1986

JUN 11 1986

Mr. Alan Partridge
Bureau of Land Management
Richfield District Office
150 East 900 North
Richfield, Utah 84701

COMMENTS ON DRAFT RESOURCE MANAGEMENT PLAN ENVIRONMENTAL IMPACT STATEMENT FOR THE HOUSE RANGE RESOURCE AREA.

The Utah Wildlife Federation is one of the largest organizations of conservationists and outdoor recreationalists in the state of Utah. This organization consists of members and organizations state wide, including the resource planning area. We would like to take this opportunity to give input to the planning stages of this plan.

The alternative that best accomplishes the objectives of this organization and it's 4,000 members would be alternative "B". We feel alternative "D" is being promoted by BLM as an alternative that is balanced for all uses but, in reality, is not much different than alternative "A", the "no action" alternative.

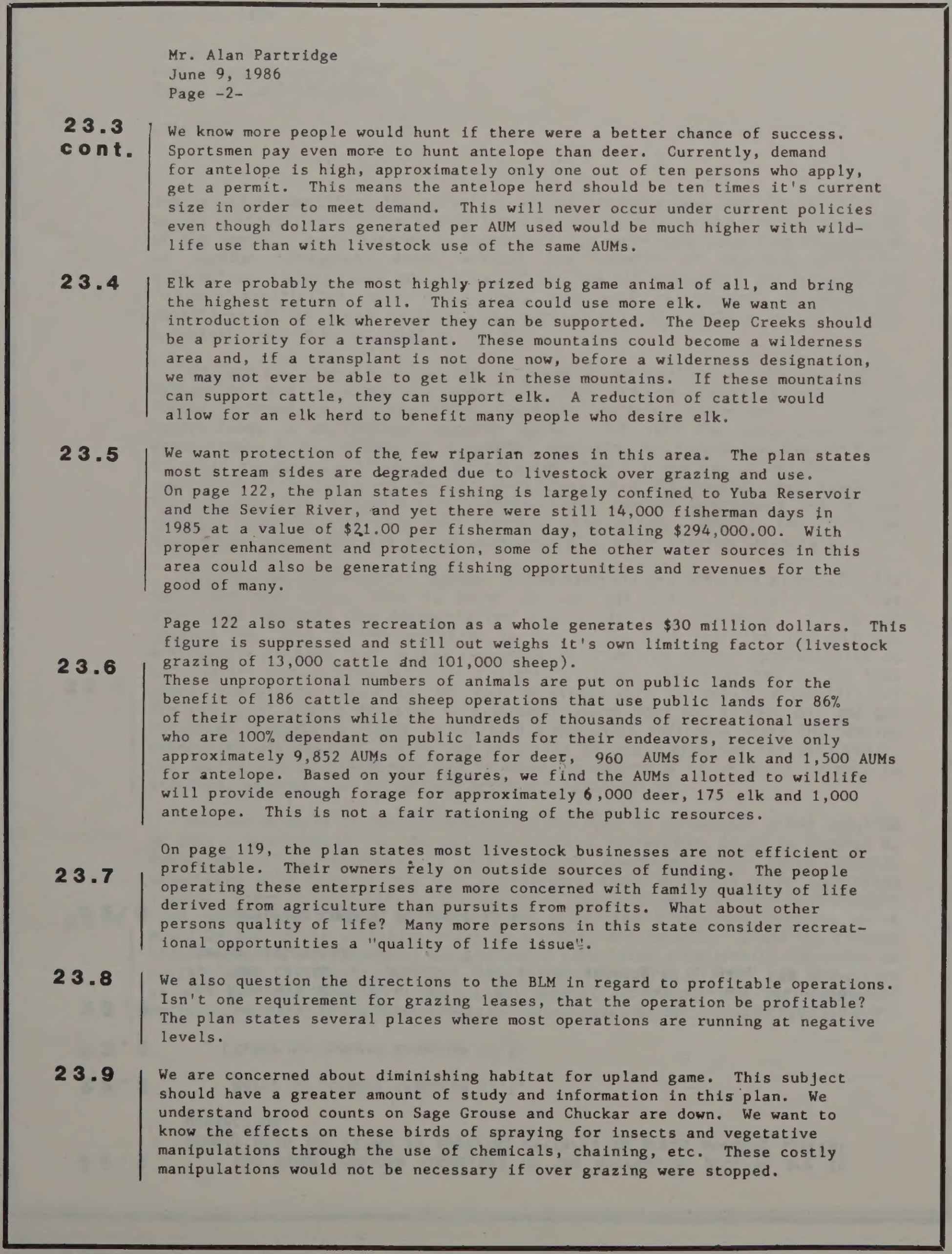
**23.1** No action is basically the continuation of destructive, and basically single use practices. The single use being livestock "over grazing". As conservationists, we have to question the need to continue management practices that, as stated in the plan, will continue an overall decline in productivity.

There should not be any activation of livestock grazing above the carrying capacity of the range, even on a study basis. Why study a known fact? This is just a tactic to keep up the poor management practices that favor livestock interests. Why does BLM insist on doing this?

**23.2** In the summary on page 6, the plan states raptors would not be affected. We disagree with this. When overgrazing and the subsequent vegetative manipulations occur, raptor prey species, such as rabbits and rodents will be adversely affected and this will adversely affect raptors, including the bald eagle which winters in this area and depends on the prey species.

**23.3** Grazing should be cut back enough to insure that there will be no impact to endangered species, and that the increasing demand for more wildlife will be able to be met. The public in Utah needs more hunting, fishing and outdoor opportunities. This resource area can provide for some of these opportunities if the BLM will allow it.

Our state wildlife agency (DWR) will increase their management objectives if more forage is allocated to wildlife. The BLM partly realizes the values of recreation but does little to enhance these values. On page 122 of the plan, it states the value of hunting, alone, was 6.6 million dollars, a figure that could be much higher if wildlife numbers were allowed to increase to demands.



Mr. Alan Partridge
June 9, 1986
Page -2-

**23.3 cont.** We know more people would hunt if there were a better chance of success. Sportsmen pay even more to hunt antelope than deer. Currently, demand for antelope is high, approximately only one out of ten persons who apply, get a permit. This means the antelope herd should be ten times it's current size in order to meet demand. This will never occur under current policies even though dollars generated per AUM used would be much higher with wildlife use than with livestock use of the same AUMs.

**23.4** Elk are probably the most highly prized big game animal of all, and bring the highest return of all. This area could use more elk. We want an introduction of elk wherever they can be supported. The Deep Creeks should be a priority for a transplant. These mountains could become a wilderness area and, if a transplant is not done now, before a wilderness designation, we may not ever be able to get elk in these mountains. If these mountains can support cattle, they can support elk. A reduction of cattle would allow for an elk herd to benefit many people who desire elk.

**23.5** We want protection of the few riparian zones in this area. The plan states most stream sides are degraded due to livestock over grazing and use. On page 122, the plan states fishing is largely confined to Yuba Reservoir and the Sevier River, and yet there were still 14,000 fisherman days in 1985 at a value of $21.00 per fisherman day, totaling $294,000.00. With proper enhancement and protection, some of the other water sources in this area could also be generating fishing opportunities and revenues for the good of many.

**23.6** Page 122 also states recreation as a whole generates $30 million dollars. This figure is suppressed and still out weighs it's own limiting factor (livestock grazing of 13,000 cattle and 101,000 sheep). These unproportional numbers of animals are put on public lands for the benefit of 186 cattle and sheep operations that use public lands for 86% of their operations while the hundreds of thousands of recreational users who are 100% dependant on public lands for their endeavors, receive only approximately 9,852 AUMs of forage for deer, 960 AUMs for elk and 1,500 AUMs for antelope. Based on your figures, we find the AUMs allotted to wildlife will provide enough forage for approximately 6,000 deer, 175 elk and 1,000 antelope. This is not a fair rationing of the public resources.

**23.7** On page 119, the plan states most livestock businesses are not efficient or profitable. Their owners rely on outside sources of funding. The people operating these enterprises are more concerned with family quality of life derived from agriculture than pursuits from profits. What about other persons quality of life? Many more persons in this state consider recreational opportunities a "quality of life issue".

**23.8** We also question the directions to the BLM in regard to profitable operations. Isn't one requirement for grazing leases, that the operation be profitable? The plan states several places where most operations are running at negative levels.

**23.9** We are concerned about diminishing habitat for upland game. This subject should have a greater amount of study and information in this plan. We understand brood counts on Sage Grouse and Chuckar are down. We want to know the effects on these birds of spraying for insects and vegetative manipulations through the use of chemicals, chaining, etc. These costly manipulations would not be necessary if over grazing were stopped.

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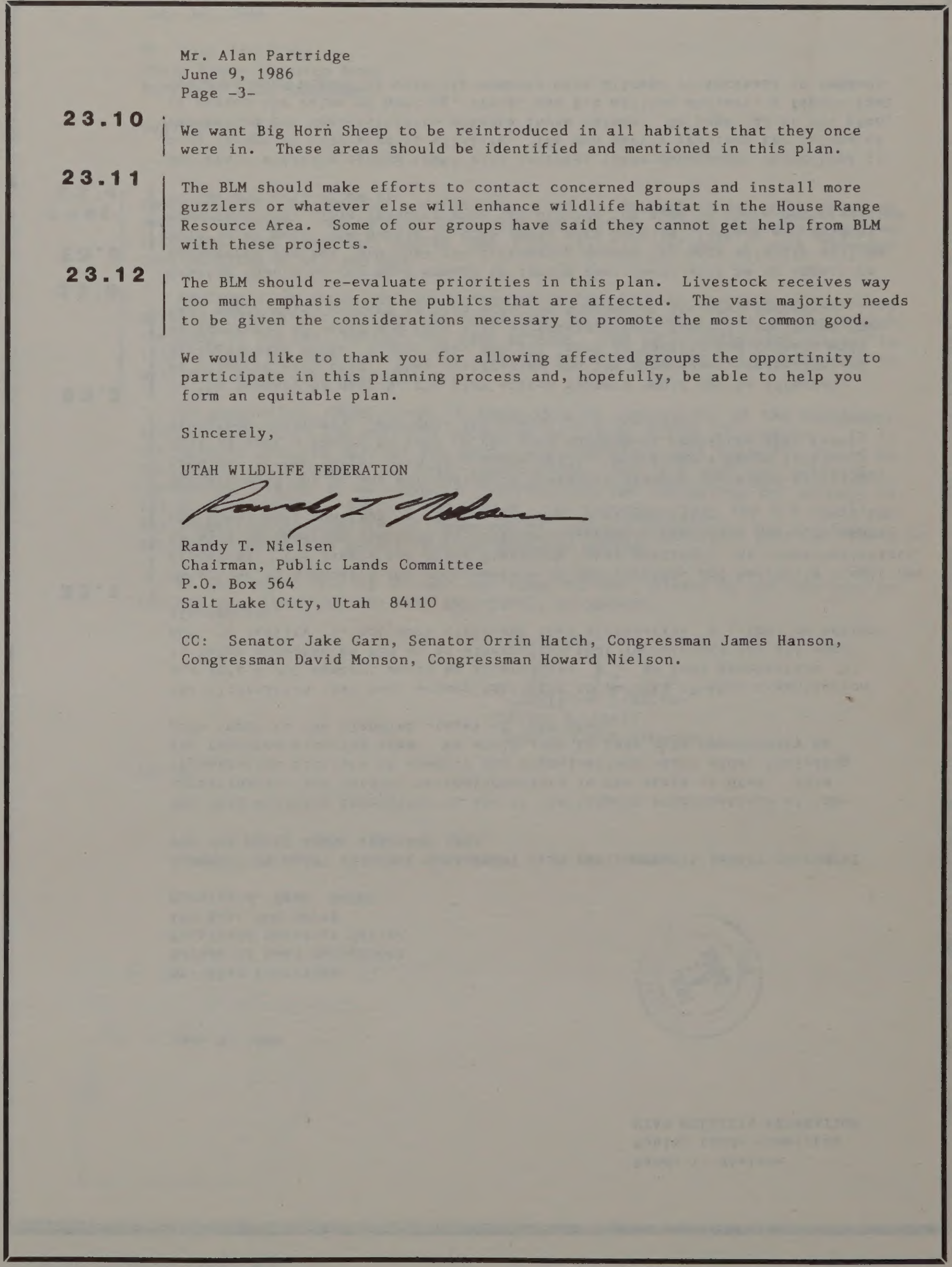

Mr. Alan Partridge
June 9, 1986
Page -3-

**23.10** We want Big Horn Sheep to be reintroduced in all habitats that they once were in. These areas should be identified and mentioned in this plan.

**23.11** The BLM should make efforts to contact concerned groups and install more guzzlers or whatever else will enhance wildlife habitat in the House Range Resource Area. Some of our groups have said they cannot get help from BLM with these projects.

**23.12** The BLM should re-evaluate priorities in this plan. Livestock receives way too much emphasis for the publics that are affected. The vast majority needs to be given the considerations necessary to promote the most common good.

We would like to thank you for allowing affected groups the opportinity to participate in this planning process and, hopefully, be able to help you form an equitable plan.

Sincerely,

UTAH WILDLIFE FEDERATION

Randy T. Nielsen
Chairman, Public Lands Committee
P.O. Box 564
Salt Lake City, Utah 84110

CC: Senator Jake Garn, Senator Orrin Hatch, Congressman James Hanson, Congressman David Monson, Congressman Howard Nielson.

**23.1** Alternative A (No Action) represents the continuation of existing management practices and use levels under a multiple-use framework. The present day-to-day administration of public lands is not single-use oriented nor is it a static process of allocating the same uses on a repetitive basis. BLM continuously refines management practices and adjusts resource use levels, where necessary, to protect and enhance the various resource values on public lands.

By law, the BLM cannot authorize grazing use that exceeds the carrying capacity of the range. However, the BLM cannot make immediate adjustments to established, authorized livestock use levels until a "proper level" is determined and supported through monitoring data. At present, the BLM has initial inventory data that indicates approximate "proper" stocking levels, but additional monitoring data is needed to refine these estimates. As monitoring data becomes available, proper stocking levels will be established and implemented. This will not be a "waiting" process in many instances, as with all proposed alternatives, the BLM will seek voluntary grazing use reductions where indicated as an on-going process.

**23.2** The effects of overgrazing on different vegetation associations within the raptor prey base in the HRRA has not been determined.

**23.3** The resource area manages one of the heaviest used recreation areas, Little Sahara. The entire area is open to hunting under regulations provided by UDWR. Waters in the resource area is limited; however, some fishing is available.

Wildlife species need sufficient habitat in order to survive. This includes an adequate amount of food, water, cover, and space throughout the year. If any part of the habitat is limited, the number of animals that can survive is limited as well. Attempts to meet demands for wildlife must be met by managing the important habitat components. UDWR and BLM study the habitat in order to determine the limiting factors. Both agencies cooperate to manage wildlife numbers consistent with the carrying capacity and multiple use management.

**23.4** BLM is currently working with the Goshute Tribe and the UDWR on the possibility of an elk transplant on the Deep Creek Mountains. The relationship of such a transplant to the bighorn sheep, recently planted there, and other limiting factor has not yet been determined.

**23.5** Alternative D, the Preferred Alternative, analyzes the impacts associated with protection of the riparian habitat. Protection would include inventory of the habitat and the identification of limiting factors. Management plans would then be developed, and the riparian habitat condition improved.

Most other small streams with the potential to produce fish are also being used; however, the potential and actual use is low.

**23.6** Forage allocation for big game is not the same under alternatives A, B, and C. Alternative D would continue the present management and only allocate forage for the current big game population for the 5-year monitoring period. The actual long-term allocation is not known but is expected to be somewhat above the present levels because of the forage produced by habitat improvements as stated on Page 133 of the Draft RMP/EIS. That forage will be divided between livestock and big game.

**23.7** The BLM is not in the business to create, foster, or preserve lifestyles of any one particular group of people. Contrary to this, our mandate is to manage the public lands to assure the continued role of the public domain as a national resource for all individuals/groups to use. In this regard, one of BLM's goals is to restore, maintain, and enhance the productivity of public land for the benefit of future generations. Included in this goal is the objective to provide water, forage, and browse for wildlife, thus potentially opening up long-term recreation opportunities to the public that may add a new or expanded dimension to individual lives, based on personal preference.

**23.8** When a livestock operator comes onto the public lands as a permittee, he/she must demonstrate that he/she is engaged in the livestock business and owns or controls land or water base property. Demonstrated prior profitability is not a condition.

One of the BLM components of multiple use management is to manage public rangelands for livestock grazing, which involves the protection, regulated use, and development of forage produced on public lands, and the management of livestock use to obtain a sustained yield of forage. While these factors help stabilize the livestock industry on public lands, the BLM cannot insure the profitability of any livestock operation. Profitability is manifested largely through an operator's efficiency and the market place. Market prices, land values, and fluctuating interest rates are all beyond the BLM's sphere of control. Many take local area jobs to remain in the local community. They feel the value and benefit associated with rural living is important.

**23.9** Upland game habitat was introduced on Page 64 of the Draft RMP/EIS. An Environmental Assessment that analyzes the impacts of the APHIS Rangeland Spray Protection Program has recently been prepared by the Richfield District. That document states that sensitive habitat for upland game would not be sprayed.

Impacts of overgrazing on upland game habitat is variable and difficult to assess. At least one expert (Edminister, 1954) said that "excessive foraging by domestic animals encourages some of the bird's (chukar's) key food plants, such as cheatgrass." However, he (Edminister) also stated that sage grouse, "depends for its existence on sagebrush land kept in good vegetation condition." Due to the limited amount of data that the BLM has, a monitoring program would be required to determine future impacts associated with grazing."

Overgrazing admittedly contributes to rangeland deterioration; however, other factors, such as fire and invasion of weed species (pinyon-juniper and sagebrush), also contribute.

## Response Letter 23

**23.10** We do not know of all the areas that bighorn sheep once inhabited. Bighorn sheep habitat has been identified in consultation with UDWR. A reintroduction of 15 animals in the Deep Creek Mountains has already been conducted. More reintroductions will take place as the animals become available. However, reintroduction sites have been prioritized on a statewide basis, and additional transplants would follow the priority.

Another release is scheduled soon in the Deep Creek Mountains. The Fish Springs Mountains is another potential site being considered for re-establishment. The re-establishment of bighorn sheep is the responsibility of UDWR working with the BLM who manages the habitat.

**23.11** BLM's "Take Pride in America" program places an emphasis on volunteer assistance. Considerable effort has been made by the BLM to recruit volunteers for project work, as well as for donations of needed equipment, to get the job done.

Faced with the aspect of tighter budgets, the BLM will be looking for volunteer assistance whenever possible. The installation of guzzlers or other habitat improvement structures would have to be evaluated in light of available funding and manpower from both private and Federal sources.

**23.12** Under multiple use management, a Federal agency cannot assign priority to any specific use. It can, however, authorize that use or combination of uses which will best achieve the objectives of multiple use (43 CFR 1725.3-1). In selecting Alternative D as the preferred alternative, grazing animals were considered an important part of the rangeland environment. Their use is authorized under the Taylor Grazing Act of 1934 and constitutes one of the important uses of the area. The use has predominated in the area for about 100 years. However, as future uses begin to shift, appropriate steps will be taken to reevaluate priorities within the plan. It should be stated that the BLM considered other uses, including recreationists and sportsmen, to round out a balance of resource uses. Hence, the BLM objectives stated in the plan fit in the current land use and needs of the region. This is especially true in the case of forage production for livestock, wild horses, and wildlife to insure a sustaining yield, assuring future generations of an equal or better supply.

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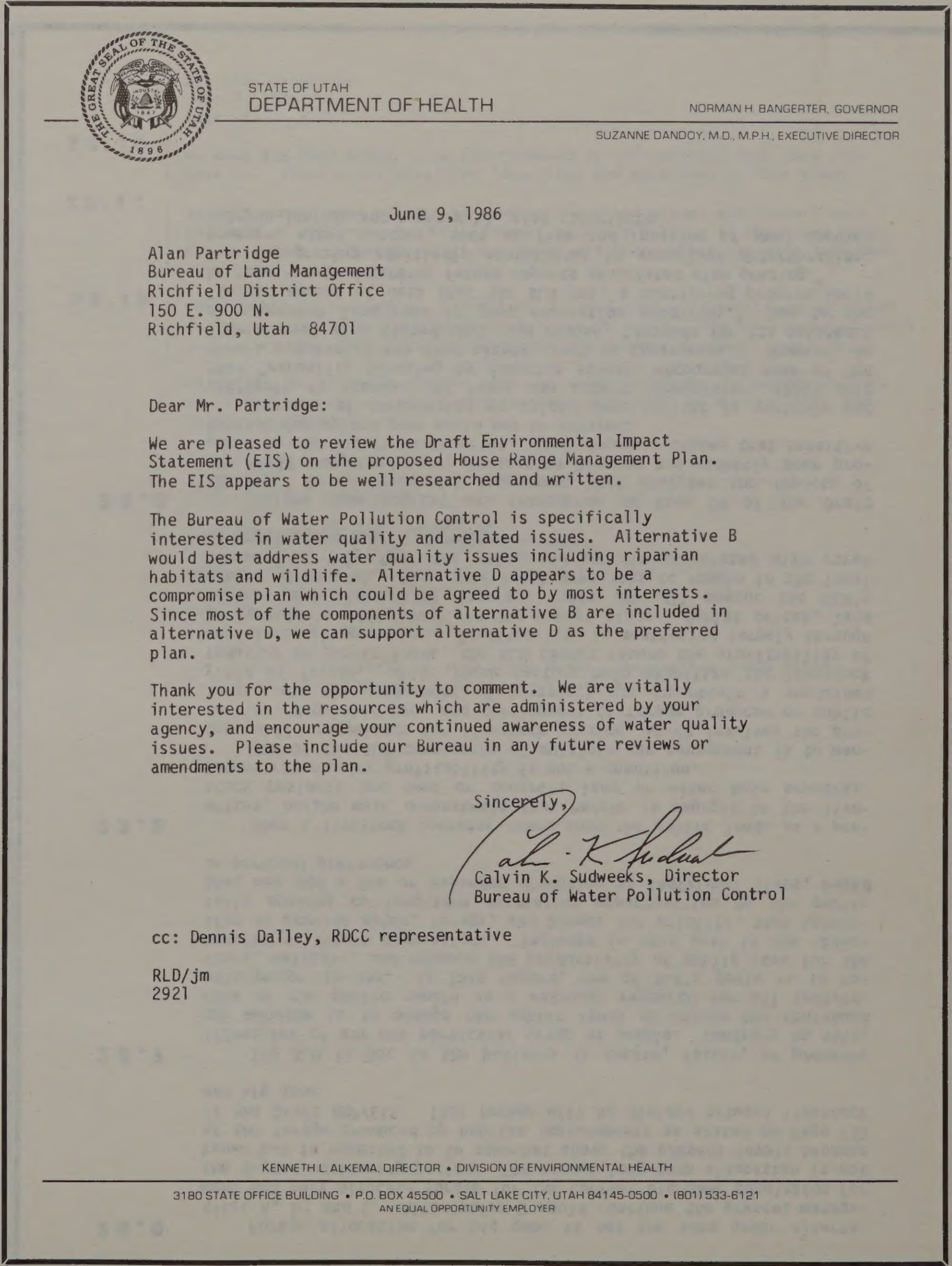
## Comment Letter 24



1896

STATE OF UTAH
DEPARTMENT OF HEALTH

NORMAN H. BANGERTER, GOVERNOR
SUZANNE DANDOY, M.D., M.P.H., EXECUTIVE DIRECTOR

June 9, 1986

Alan Partridge
Bureau of Land Management
Richfield District Office
150 E. 900 N.
Richfield, Utah 84701

Dear Mr. Partridge:

We are pleased to review the Draft Environmental Impact Statement (EIS) on the proposed House Range Management Plan. The EIS appears to be well researched and written.

The Bureau of Water Pollution Control is specifically interested in water quality and related issues. Alternative B would best address water quality issues including riparian habitats and wildlife. Alternative D appears to be a compromise plan which could be agreed to by most interests. Since most of the components of alternative B are included in alternative D, we can support alternative D as the preferred plan.

Thank you for the opportunity to comment. We are vitally interested in the resources which are administered by your agency, and encourage your continued awareness of water quality issues. Please include our Bureau in any future reviews or amendments to the plan.

Sincerely,

Calvin K. Sudweeks

Calvin K. Sudweeks, Director
Bureau of Water Pollution Control

cc: Dennis Dalley, RDCC representative

RLD/jm
2921

KENNETH L. ALKEMA, DIRECTOR • DIVISION OF ENVIRONMENTAL HEALTH

3180 STATE OFFICE BUILDING • P.O. BOX 45500 • SALT LAKE CITY, UTAH 84145-0500 • (801) 533-6121
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## Comment Letter 25

8552 Baron Dr
Knoxville TN 32923
June 8, 1986

Mr. Alan Partridge
Bureau of Land Management
Richfield District Office
150 East 900 North
Richfield, Utah 84701

Dear Sir,

Thank you for the opportunity to comment on the House Range Resource Area Resource Management Plan and Environmental Impact Statement.

I favor Alternative B with some stipulations:

25.1 1) No woodland areas should be converted to grass lands.

25.2 2) No non-native plant species should be planted, even where they have previously been introduced.

25.3 3) No additional right-of-way should be granted except in existing designated corridors.

25.4 4) ~~Grazing~~ Livestock grazing should be reduced 10%s each year for all allotments in the improve category or where the range condition is not good or excelent until these problems have been rectified

25.5 5) ORV use should be prohibited, ~~at least in the critical seasons~~ in the critical habitat areas indicated on Figure 3.8 and on other critical wildlife habitats, at least in the critical seasons,

These preferences are based on two observations.

25.6 The first is that these lands are managed by the BLM for all the American people not just for special economic interests like livestock operators. Therefore wildlife and other amenity values which benefit all Americans wishing to partake, not just the special economic

## Comment Letter 25

25.7 interests. The second observation is that the livestock operators do not even pay fair market value for the priviledge of running their animals on public land. If they need a hand out to make a living, they should apply at the local welfare office not by getting subsidized grazing rights.

Thank you for considering my opinions

Sincerely
Lance McCold
Lance McCold

P.S. Please continue to keep me informed of your planning process.

## Response Letter 25

**25.1** Converting pinyon/juniper woodlands to grass/browse seedings is one method of restoring productivity and providing soil protection on public lands that have become relatively unproductive. Woodland sites are evaluated as to their suitability for conversion and ability to provide a variety of multiple use benefits. Other benefits from treatments include:

1. Early spring grazing forage for livestock/big game.
2. Improved livestock grazing distribution.
3. Enhanced forage diversity/productivity and range condition.
4. Improved watershed stability.
5. Improved hunting and other recreational opportunities.
6. Improved quality and quantity of wildlife habitat.

**25.2** The BLM selects species to reseed ranges, based on their ability to provide certain resource needs, such as early spring forage (crested wheatgrass), wildlife browse (small burnett), or establish quick cover for watershed protection (annual ryegrass). Other factors, such as production potential, cost, and seed viability and availability, are also considered in the selection. In nearly all cases, a mix of seed (both native and non-native) is applied to provide the best forage balance and diversity for livestock, wildlife, and watershed.

**25.3** Rights-of-way are a viable use of public lands and can be required by law. BLM has been, however, concerned with rights-of-way and corridors. We have named important corridors and avoidance areas in the Draft RMP/EIS (see pages 14, 26, and 101).

**25.4** The arbitrary reduction of grazing use without supporting data is not in the interest of all public land users concerned and is against Federal regulations until sufficient monitoring data has been obtained. As proposed under Alternative D, grazing use will be adjusted on the 38 allotments (identified on Page 35 of the Draft RMP/EIS) when monitoring studies are completed within 5 years, and those studies verified the need for reductions.

It must be recognized that not all "I" category allotments require grazing allocation reductions. A substantial number of allotments were placed in the "I" category because they have:

1. Grazing distribution problems associated with the lack of adequate watering facilities, and/or
2. Suitable areas for vegetation treatment where range productivity can be improved.

## Response Letter 25

**25.5** At this time, there are no identified adverse impacts caused by ORV use to critical wildlife habitat. The BLM monitors these areas closely.

The rough, rocky mountainous areas of Fish Spring and the Deep Creek Mountains do not lend themselves to a lot of ORV use. The dense vegetation and uninteresting nature of the Maple Peak area or the hills west of Juab Valley have not made these critical areas popular for ORVs.

If members of the public have identified specific conflict areas, the BLM would like to know about it.

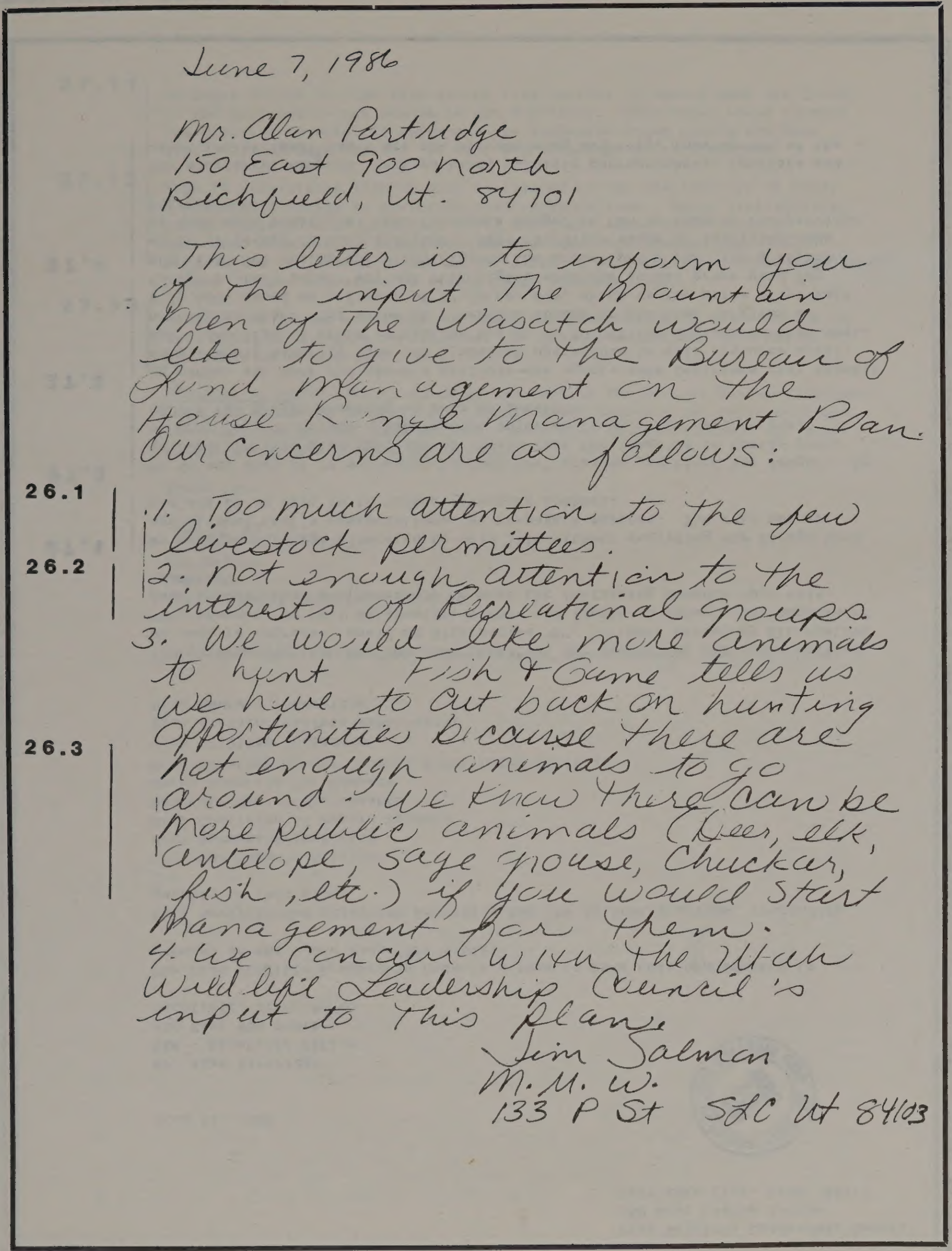
**25.6** Refer to Comment Response 23.7.

**25.7** The setting of grazing fees is the responsibility of Congress. However, your concern that grazing fees are not in line with fair market values is shared by many. The BLM is aware that public grazing fees have been controversial for many years. Under the Public Rangeland Improvement Act of 1978, grazing fees were based on a 7-year trial period from a base value of $1.23 per AUM to a forage value index, beef prices, and production costs. This period ended in 1985; however, the President extended the 1985 fee level into 1986 pending the establishment of a new formula for a westwide fee system.

In 1982-83, a joint Forest Service-BLM study of fair market rental values of grazing on public rangelands indicated that the market value of grazing within the region (including parts of Nevada, California, Arizona, and southern New Mexico) was $5.20 per AUM for cattle and horses and $1.05 per AUM for sheep. The current fee is $1.35 per AUM.

Various grazing fee options have been studied that considered generation of revenues, impacts on permittees, and equity among livestock producers. To date, no agreement has been reached on a uniform fee system and the index to be used.

## Comment Letter 26



June 7, 1986

Mr. Alan Partridge
150 East 900 North
Richfield, Ut. 84701

This letter is to inform you of the input The Mountain Men of The Wasatch would like to give to the Bureau of Land Management on the House Range Management Plan. Our concerns are as follows:

26.1 1. Too much attention to the few livestock permittees.

26.2 2. Not enough attention to the interests of Recreational groups.

26.3 3. We would like more animals to hunt. Fish & Game tells us we have to cut back on hunting opportunities because there are not enough animals to go around. We know there can be more public animals (deer, elk, antelope, sage grouse, Chuckar, fish, etc.) if you would start management for them.

4. We concur with the Utah Wildlife Leadership Council's input to this plan.

Jim Salmon
M.M.W.
133 P St SLC Ut 84103

## Response Letter 26

**26.1** When writing the EIS, the Richfield District Office was aware of the importance of livestock in the region. In 1985, Millard County had the third highest number of cattle within the State and was 13th in the number of sheep. Juab County ranked lower due to smaller numbers. Hence, it should be stated that livestock is an important component of the rangeland environment. This use has predominated in the area for the past century and is authorized by the Taylor Grazing Act of 1934. This is not to infer that the BLM did not consider other users, including recreationists and sportsmen, to round out an equitable balance of resource use. Indeed, all users are considered under BLM policy to manage public lands and resources in an equitable manner to preserve and protect the resources of the public lands.

**26.2** Refer to Comment Response 23.3.

**26.3** Refer to Comment Response 23.3.

Utah Wildlife Leadership Council
160 West Layton Avenue
Salt Lake City, Utah 84115

SALT LAKE CITY, UT FAIRGROUNDS STA. USPO
JUN 13 1986

June 11, 1986

Mr. Alan Partridge
BLM - Richfield Office
150 East 900 North
Richfield, Utah 84701

The Utah Wildlife Leadership Council wishes to take this opportunity to comment on the House Range RMP & EIS.

This newly formed coalition presently has the following groups, responding jointly to this plan:

Utah Sportsman's Alliance
Utah Bowmens Association
Utah Coalition of Muzzle Loaders
Mountain Men of The Wasatch
Rocky Mountain Fur Company
Utah Shooting Sports Council & NRA Local Affiliate
Utah Wildlife Federation
Utah Predator Callers Association
Utah Hunters Federation

The alternative that has the most potential for increasing the opportunities we seek to increase, would be Alternative "B", followed second by Alternative "D"; however, we feel Alternative D does too little to enhance the numbers of game animals that are necessary to meet the increasing demands upon this resource.

**27.1** We want more forage allocated to wild life without degrading the forage base and without costly manipulations, at taxpayers expense. The only way we can see to do this is to reduce livestock numbers.

**27.2** We do not feel it is necessary to "monitor" grazing practices any longer. It is clear in your plan that you are aware that the range is in mostly poor, or only fair condition. The logical solution is only too easy to see, REDUCE THE ABUSE, starting as soon as possible.

**27.3** We cannot sit back and watch a multiple use agency make decisions that benefit only a small minority (the 186 livestock operations in this resource area). BLM's own figures state recreation brings in 30 million dollars in this small portion of Utah. The value of livestock forage in the area is given as $736,680, based on a figure of $7.50 per AUM, which is the price of private forage in this area. Why use this figure when the actual price paid for

**27.4** AUM is $1.30? Using the $1.30 figure, the actual price paid for $736,680 worth of forage is only $132,603 - **WHY?** Wildlife usage of available AUMs is much more beneficial than livestock usage, as can be seen by the previous figures.

The sportsmen, campers, back packers, wildlife photographers, tourists and other recreational users are the overwhelming majority, (nearly 90% of the

**27.4 cont.** population of the state) yet we receive only enough forage to maintain minimal numbers of animals. The BLM indicates that antelope and deer numbers would increase under the prefered alternative (alternative "D"), but the supporting AUMs allotted to these species will remain at current levels, which are below prior stable numbers. There are no changes planned in elk numbers in the prefered alternative (alternative "D"). Utahns would like to see more elk in our state.

Your plan only allows for forage for approximately 175 elk in this area, but provides for 13,000 cattle and 101,000 sheep. Elk introduction, re-introduction and increases should be a priority to all suitable habitat, especially in the Deep Creek Mountains. Currently Utah has only 1/3 to 1/4 of the elk of our neighboring states like Colorado, Wyoming, Montana and Idaho. We cannot afford to see our residents go to other states to hunt elk when this activity could bring income to our state.

Elk numbers are below wild horse numbers. Elk are a native species - horses are not. Maybe we need a "wild elk and deer act" to make sure BLM is responsive to our needs for more of these species.

**27.5** On page 47, the plan mentions that the Gosute Indian's revenue is derived from the sale of cattle, sheep, hay and cattle guards. The plan says the main emphasis for economic growth will continue to be agriculture, they also hope to further develop the reservation's recreational potential. Is the definition of "recreational potential" purposfully left vague, or is the BLM so used to promoting livestock and agriculture that nothing else can penetrate their ways of thinking?

It is our understanding that the Gosutes want a transplant of elk on The Deep Creek Mountains. We support this and would like to see some mention of it's implications in this plan.

**27.6** Bison were once relatively abundant throughout Utah. What major problems does the BLM see with introduction of Bison on some of the large expanses of public lands in this planning area? We support more situations similar to the Henry Mountains.

**27.7** Big Horn Sheep are allotted only 52 AUMs. This could not allow much more than 25 sheep (our best guess). Your conversion table on page 75 does not include a conversion for Big Horn Sheep. People are willing to pay large sums of money to hunt Big Horn Sheep. Why are so few AUMs allocated to them? Numbers will increase if forage is allocated. The Utah Division of Wildlife Resources knows we, the sportsmen of Utah, want more of these magnificent animals.

**27.8** We would like to see protection from overgrazing to the few riparian zones, in order to decrease sedimentation and enhance fisheries and all riparian dependant wildlife species.

**27.9** We would like to see any potential fisheries developed into fisheries, unless doing so would harm any threatened, endangered or sensitive species.

**27.10** We want to know the impacts to raptor prey species if overgrazing is continued. Bald Eagles are dependent on these species.

# Comment Letter 27

27.11 On pages 64 and 76, the plan states five species of upland game are found in the unit and actual census is not available. What about brood counts? The Division of Wildlife Resources has indicated brood counts are down, especially on Sage Grouse. We want your findings on this subject.

27.12 Page 76 also states distribution is limited to the availability of water and suitable forage in preferred plant associations. Water availability can be enhanced with guzzlers, etc., but plant associations must be protected from manipulations such as the ones indicated on page 130, alternative "D", which states 65,000 acres of potentially suitable sage brush/pinyon juniper converted to stable range land seedings.

27.13 We also see insect sprayings and other manipulations as a major factor to declining upland game populations. We want more specific information in this plan on this issue.

Finally, we would like to thank groups such as The Natural Resources Defense Council for making it possible, through their lawsuits and court actions, for concerned groups, such as ours, to be able to have a chance for input to the BLM on public land use issues.

Thank you.

Bob Nelson

Bob Nelson
Chairman
UTAH WILDLIFE LEADERSHIP COUNCIL

CC: Jake Garn, Orrin Hatch, James Hansen, David Monson, Howard Nielson

# Response Letter 27

27.1 Refer to Comment Responses 21.14 and 25.1.

27.2 Refer to Comment Response 25.4.

27.3 Refer to Comment Response 25.7.

27.4 Refer to Comment Response 21.14 for how wildlife (big game) forage was allocated in the various alternatives.

In regard to limited forage allocations for elk, elk habitat is very limited in the HRRA. Possible portions of the Deep Creek Mountains in the West Desert and the eastern Tintic Planning Unit provide the only potentially suitable elk habitat areas in the resource area (see Figure 3-8 in the Draft RMP/EIS). Because of the recent transplant of bighorn sheep, the possibility of elk transplant on the Deep Creek range is being carefully examined.

Additionally, the potentially suitable elk habitat is primarily in allotments grazed by cattle. As proposed grazing management opportunities (development of AMPs, vegetation treatments, etc.) are implemented in these allotments, forage benefits for elk would also be expected because of their similarity in diet preference with cattle (refer to Comment Response 10.2).

It should be pointed out that wild horses are protected and managed by the Wild Horse and Burro Act. Because of this Act, wild horses and burros will be managed and provided forage on the public rangelands.

The trend in population of elk in Utah is definitely increasing. The State of Utah also has more elk than Nevada, Arizona, and New Mexico.

27.5 The "recreation potential" wording was taken directly from the reference quoted at the end of the paragraph on Page 47 of the Draft RMP/EIS (U.S. Department of the Air Force, 1981b). Page 224 of this Air Force report states:

> "The primary emphasis for economic growth and employment is on agriculture. The tribe also intends to develop the reservation's recreation potential, expand its steel fabricating plant, expand and upgrade housing and improve communications, fire safety, and health service."

The Goshute Tribe is now in the process of developing their proposal for transplanting elk on the Deep Creek Mountains. Should their proposal significantly change this RMP, it would be amended to show this change.

27.6 Reintroduction of big game animals on to BLM-administered land is planned in consultation with UDWR. In this consultation, UDWR has the lead in numbers and kinds of animals, while BLM has the lead on habitat management. A state-wide priority for transplanting big game species includes bighorn sheep, antelope, and elk. Such a plan has not been made for bison.

## Response Letter 27

**27.7** Refer to Comment Response 23.10. The conversion factor used to determine AUMs of forage needed for bighorn sheep is 5.5. Forage allocation for each alternative is different and ranges from total commodities production on one extreme (alternatives A, C, and D) to emphasis on production of wildlife on the other (Alternative B).

**27.8** The riparian habitat in the HRRA provides vital cover, food, space, and water for a variety of wildlife. In the Deep Creek Mountains, at least 90 species are somewhat dependent upon the riparian habitat. Alternatives B, C, and D were designed to improve the riparian habitat.

**27.9** Improving the fair and poor condition of riparian habitat would benefit fish. Streams in the Deep Creek Mountains that provide habitat for the Bonneville cutthroat trout, a sensitive fish species, have been closed to fishing by UDWR.

**27.10** The effects of overgrazing, should it actually occur, on different vegetation associations in the raptor prey base in the HRRA has not been determined.

**27.11** Refer to Comment Response 23.9.

**27.12** Before any vegetation treatment occurs, upland game habitat will be identified and protected with appropriate mitigating measures, such as no treatment zones or reseeding with a more desirable seed mixture for upland game species.

**27.13** Insect spraying was not discussed in this EIS. Refer to Comment Response 23.9.

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## Comment Letter 28

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VIII
ONE DENVER PLACE — 999 18TH STREET — SUITE 1300
DENVER, COLORADO 80202-2413

JUN 19 1986

Ref: 8PM-EA

Mr. Alan Partridge
Bureau of Land Management
Richfield District Office
150 East 900 North
Richfield, Utah 84701

Dear Mr. Partridge:

In accordance with our responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act, the Region VIII office of the Environmental Protection Agency (EPA) has completed its review of the Draft Resource Plan, Environmental Impact Statement for the House Range Resource Area (HRRA).

Our review of the two major planning issues, forage allocation and off-road vehicle (ORV) use, is tempered with EPA's concern for protection and attainment of water quality standards and associated beneficial uses, riparian area management, protection of ground water and monitoring. We support the BLM actions under the preferred alternative for restriction and management of ORV areas and activities. These actions will assist in the protection of watershed values.

**28.1** EPA has concerns with the forage allocation issue, primarily related to the attainment of water quality standards and associated beneficial uses and riparian area management impacts. The DEIS reveals a number of existing environmental impacts on various grazing allotments. Yet the Plan identifies no corrective action other than additional monitoring. Although we support BLM's effort to identify problems through their monitoring efforts, we question its utility if corrective actions are not being applied to identified problems. The Plan should clearly identify how and when existing environmental impacts will be addressed and the process for using monitoring data to correct future problems. Attached for your consideration in preparation of the final RMP/EIS are our detailed concerns and comments.

We have rated the draft RMP/EIS as EC-2 (environmental concerns-insufficient information). This means that our review has identified environmental impacts that should be avoided to fully protect the environment. Additional mitigation measures, as noted in our detailed comments, could help reduce these impacts. Please contact Mike Hammer of my staff for further EPA coordination at (303) 293-1716 or FTS 564-1716.

Sincerely,

Dale Vodehnel

Dale Vodehnel, Chief
Environmental Assessment Branch
Policy and Management

cc: William Dickerson, A-104 (OFA, HQ)
Kerry Clough, ARA 8PM

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EPA DETAILED COMMENTS ON BLM DRAFT RESOURCE MANAGEMENT PLAN AND ENVIRONMENTAL IMPACT STATEMENT FOR THE HOUSE RANGE RESOURCE AREA

**28.1 cont.** A stated purpose of the EIS is to "meet the requirements for a site-specific grazing environmental impact statement". The general tone of the EIS, related to grazing and associated environmental impacts, is one of hesitancy to perscribe corrective measures for known problem areas. Examples of these known problem areas are cited in the EIS. Table 3-4 on page 61, and discussion elsewhere, reflects approximately 37 per cent of existing range to be in fair or poor condition. Subsequent discussion of range trend, based on current livestock practices, projects that 94 percent of existing range condition is not expected to improve. Discussion under Wildlife, on pages 63 and 64 indicate a high percentage of deer and elk critical habitat to be in fair/poor condition. Page 76 presents the status of two sensitive species, the Bonneville cutthroat and the least chub, as being limited in-part due to livestock grazing of riparian areas.

Even though these and other problem areas have been defined in the EIS, the preferred alternative, Alternative D, states "Livestock use numbers would initially remain at active preference (demand). Grazing allotments would continue to be monitored to identify problems and needs. On those allotments presently not meeting forage demand, range condition would be improved through the application of grazing management systems." EPA appreciates the commitment to additional monitoring to identify problems and needs but feels there should be a more definitive commitment to the correction and mitigation of existing problems and impacts due to grazing practices/levels.

The discussion under Livestock Season of Use, page 57, and Figure 3-4 should be expanded to include short term reduction in grazing intensity and change in grazing strategy. Riparian areas are often overgrazed in relation to other portions of an allotment. Yet a rating of allotment carrying capacity is often based on the allotment's average condition. Changes in season or intensity of use can reduce streambank sloughing by allowing fall vegetation growth, which can help reduce erosion due to high spring runoff.

EPA suggests that the final EIS disclose where the HRRA is in the information collection process, what additional monitoring information is needed beyond the selection of an RMP, and projections of how long before specific activity planning might begin. For example, we note that the Rangeland Value Inventory and Monitoring System discussed in Appendix 1 is "in the second year in a baseline schedule of at least 5 years."

**28.2** It would also be helpful if the monitoring program in Appendix 2 were expanded to identify the types of studies to be used to "monitor priority riparian and aquatic habitat and key watershed areas".

## Comment Letter 28

Water Quality

It would appear that the primary source of water degradation in the HRRA would result from sedimentation impacts from both natural and management practices induced erosion. Due to the technical complexities involved in designing and implementing a monitoring program that adequately links watershed and water quality objectives (including antidegradation requirements and other narrative Water Quality Standards (WQS) such as protection of aquatic life, as well as numeric WQS), the RMP should be specific about BLM plans to conduct monitoring and evaluations to determine achievement of water quality objectives.

**28.3** As a part of rangeland monitoring, we suggest the BLM consider the following water resource monitoring components in the evaluation of the achievement of specific allotment objectives:

- goals and objectives (including effects on sensitive species in the HRRA),
- types of surveys (long-term, intensive) or assessments (including habitat evaluations and biomonitoring) to be used,
- parameters and frequency to be monitored and their suitability in achieving the monitoring goals and objectives,
- management and environmental indicators, e.g., aquatic habitat, sediment delivery, to be used in assessing impacts of past, ongoing, and proposed activities,
- use of activity monitoring in sensitive areas,
- monitoring responsibilities of BLM, allotment or mineral development lease/claim holders, and other state and Federal agencies,
- determination of adequacy of best management practices,
- reporting requirements,
- aquatic life objectives, monitoring methodology, and threshold levels for modification in management direction,
- the feedback loop to achieve timely modifications to activities in response to monitoring results.

## Response Letter 28

**28.1** In regard to livestock grazing, the initial inventory data collected is presently insufficient to provide confident estimates of proper stocking levels for all grazing allotments. Additional data (monitoring) is needed on all allotments; especially with regard to grazing utilization levels on the 38 allotments where an overallocation of use has initially been indicated. Through our monitoring program, the verification data will be collected and proper adjustments made within 5 years of Final RMP completion. During this monitoring period, the BLM will consult with the permittees and make every effort to enter into mutual agreements.

It was suggested in this comment that the proposed alternatives in the Draft RMP/EIS did not outline "corrective actions" to mitigate the various impacts associated with livestock grazing. The BLM outlined a number of corrective measures and specific grazing management proposals on pages 17, 18, 19, and 20 of the Draft RMP/EIS. Examples of these proposed actions include specific methods of allocating initial and long-term forage, steps to be taken to adjust livestock season of use, methods of controlling livestock use in riparian areas, and project implementation of suitable vegetation treatment sites. The various time frames for implementing these actions are also shown on pages 17 to 20 of the Draft RMP/EIS.

**28.2** Monitoring key watershed areas will be as described in the Proposed Action section of this Final RMP/EIS. This includes identifying water source, quantity and quality, and the continuation of monitoring channel erosion studies and climate stations. Monitoring of grazing will be emphasized on allotments where apparent overgrazing is identified, ecological condition is declining, or poor watershed conditions exist. Inventories will be conducted on riparian and aquatic habitat where conditions are not now known. Trend studies will be initiated on riparian habitat presently in poor and fair condition.

**28.3** Water resource problem areas will continue to be identified and will have site-specific plans developed. The type of suggestions you have made will be helpful in the development of these plans.

## Comment Letter 29

United States Department of the Interior

GEOLOGICAL SURVEY
RESTON, VA. 22092

In Reply Refer To:
WGS-Mail Stop 423

JUN 13 1986

Memorandum

To: Bureau of Land Management, Richfield District Office, Richfield, Utah

From: Assistant Director for Engineering Geology

Subject: Review of resource management plan/draft environmental statement for the House Range Resource Area, Utah

We have reviewed the statement as requested in the document dated March 1985.

**29.1** The statement should assess the adequacy of ground-water resources to satisfy current and increased demands and indicate measures to protect springs against damage from livestock and wildlife. The assessment should include consideration of losses of spring flow due to evaporation in evaluating the adequacy of the available ground-water supplies for the increased demand under the proposed resource management plan.

J. R. Rollo
for James F. Devine

Copy to: District Chief, WRD, Salt Lake City, Utah

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## Response Letter 29

**29.1** Approximately 2,500 acres of riparian habitat will be inventoried and water quality evaluated within 5 years of plan completion. Measures will be taken, if needed, to protect riparian habitat impacted by livestock (see Proposed Action section of this Final RMP/EIS). Under the proposed action, no major demand for, or change in, use of ground water is expected.

## Comment Letter 30

STATE OF UTAH
OFFICE OF THE GOVERNOR
SALT LAKE CITY
84114

NORMAN H. BANGERTER
GOVERNOR

June 16, 1986

Mr. Alan Partridge
Bureau of Land Management
Richfield District Office
150 East 900 North
Richfield, Utah 84701

Dear Mr. Partridge:

The Resource Development Coordinating Committee has completed its review of the Draft Resource Management Plan and Environmental Impact Statement for the House Range Resource Area. The State appreciates the effort that is required to assemble such a plan as well as what it represents--an increasingly better understanding of the resource base of Utah. Such information is essential for good decision-making and I appreciate the BLMs contribution towards that essential goal.

Based on the information in the Plan, the State's preference is for implementation of Alternative D which represents a balance of resource uses and is identified as the preferred alternative by BLM. There are a few areas where changes have been recommended to fine-tune Alternative D to the State's plans. These recommendations and other specific comments are attached. I hope you find the information useful in your final efforts at balancing the interest of resource users against the resource base.

Sincerely,

Norman H. Bangerter

Norman H. Bangerter
Governor

NHB/rs
Attachment

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## Comment Letter 30

### SPECIFIC COMMENTS AND RECOMMENDATIONS OF THE STATE OF UTAH on the DRAFT RESOURCE MANAGEMENT PLAN AND EIS FOR THE HOUSE RANGE RESOURCE AREA

### I. Summary Comments

30.1 Page 6, Raptors: The DEIS states there will be no impact. If Alternative C were chosen, there would be an impact on raptor prey populations due to overgrazing, which would impact raptor production.

### II. Chapter 2 Comments

Page 14, Rights-of-Way: The State supports the designation of corridors as a an excellent pre-planning tool to assist developers in locating facilities away from areas of concern to areas where development is most appropriate and efficient. Designation of corridors on the House Range will provide one more puzzle piece towards a complete statewide utility corridor map that coordinates similar efforts on Forest Service and other BLM lands.

30.2 Page 21, Table 2-1, Wildlife (1)(a): According to Table 3-6, there are current AUMs in the amount of 1552 and 60 for elk and bighorn sheep, respectively. These do not agree with the numbers of AUMs listed in Table 2-1 (Alternative A).

30.3 Page 23, Riparian Habitat: Given the fundamental importance of riparian areas to a healthy ecology and the state to which many areas have deteriorated--23% of stream habitat in poor condition plus 38% in an unknown condition (page 43 DEIS)--the BLM's focus on improvement is timely and essential. While the specific actions of fencing and providing off-site water for livestock are listed to improve the riparian habitat of the Salt Marsh Lake, South Tule Spring, Tule Spring and Twin Spring under Alternative B, only generic "improvement" is indicated under Alternative D. What actions are planned to accomplish this improvement under Alternative D?

30.4 Page 25, Special Recreation Management Areas: The State supports the proposed action to designate Yuba Dam, Topaz Mountain, Sheeprock/Tintic ORV area, Antelope Springs Cave and Gandy Mountain Caves as special recreation management areas. Why is Swasey Mountain excluded from the preferred alternative? We would appreciate the rational for its exclusion. Would an alternative designation of ONA for a portion of the area be an appropriate alternative?

In the case of Gandy Mountain, the cave is well known as a regional attraction and warrants special protection as a non-renewable and unique resource. It is recommended that the BLM continue to work with the Bates family in Gandy in order to allay their concerns and allow for continued public access to the cave. The Division of Parks and Recreation would like to continue to work both with the BLM and with the Bates in the development of a management plan for the cave and its environs.

Page Two
Attachment

30.5 Page 25, ORV Restriction: The Utah Division of Parks and Recreation has responsibility for Off Highway Vehicles (OHVs) in the state. These responsibilities include an interest in safety and enforcement of state OHV laws and rules. It is important to define reasonable areas where OHV activities may be pursued, and the State commends the BLM's efforts in this regard. In fact, with the passage of HB 1 in the 1986 Special Session of the Utah State Legislature, it is now the responsibility of the BLM to identify lands under their jurisdiction that are open for ATV use. Any areas that are not identified as open will be considered as closed and entering vehicles subject to violation.

In BLM's continuing work to define ORV use areas, it would be productive to continue to solicit input from affected groups in determining the appropriate areas for OHV use. The Division of Parks and Recreation has two advisory councils which may be of some assistance--the OHV Advisory Council and the Human Powered Advisory Council. The Division can facilitate the involvement of these groups in planning for the use of OHV areas.

30.6 Page 27, Figure 2-1: The legend in Figure 2-1 does not include a designation symbol for "M" Category Allotments.

30.7 Page 35, Table 2-4: In order to help the reader understand how these numbers correlate to the on-the-ground situation, it is recommended that another column be added listing "actual licensed use." The addition of this information would allow recognition of the fact that while 38 allotments would be overgrazed if active preference were exercised--in reality a lesser 14 are currently being overgrazed when estimated capacity and actual licensed use are compared. This information could also be used in the discussion on page 129 concerning proposed monitoring under Alternative D.

30.8 Page 36, Paragraph 1: The reference to Table 2-3 should be to Table 2-4.

Page 36, Special Management Designations: The State commends the BLM for its efforts to identify critical areas and to recommend these areas for special management in order to accommodate the needs of the recreating public while at the same time making provisions to protect vulnerable resources. Each area proposed for designation has special characteristics and has demonstrated an attraction factor that will continue to draw both residents and visitors to the area. With the area's close proximity to the major population centers in the state, it is critical that such areas remain available, accessible, and healthy.

It is recommended that the BLM continue to pursue identification and management of the areas' unique resources. For example, other areas of high limestone (cave forming) concentrations may be designated in the future.

III. Chapter 3 Comments

30.9 Page 45, Paragraph 2, Lines 14, 15, and 16: Chukars are found throughout the resource area in significant enough numbers to warrant being included in this

Page Three
Attachment

30.10 list. Since Rocky Mountain bighorn sheep have been re-established in the area, they should be mentioned.

30.11 Page 57, Paragraph 5, Line 9: Figure 2-2 shows allotments which have existing AMPs and not Figure 2-3 as stated.

30.12 Page 61, Range Condition: While titled a discussion of "range condition," in content the discussion is one of "ecological condition." Under the ecological condition criteria 80% of the range is in fair or better condition. However, under a different criteria such as "range forage condition," which according to the glossary is condition based on the amount of forage (lbs/acre) in relation to its potential forage production, the results may be different. For example, if the ecological criteria is used an increase in juniper (such as is indicated on page 63, paragraph 2) means that the range is in excellent condition; however, in terms of range forage condition it is not desirable. The discussion of range condition should include an evaluation under both criteria.

30.13 Page 69, Figure 3-7: The figure does not include a critical deer winter range area on the east slope of the Deep Creek Mountains in the Callao Bench Allotment as per Utah Division of Wildlife Resources (UDWR) wildlife habitat overlays. UDWR wildlife habitat overlays do not show any critical deer winter range in the Maple Peak Allotment.

30.14 Page 73, Table 3-6, Partoun Allotment: UDWR wildlife habitat overlays show no critical deer winter habitat in this allotment.

30.15 Page 74, Table 3-6, Round Valley Allotment: This allotment is not in the Central Region and UDWR knows of no critical winter elk habitat there. BLM indicates the Central Region classified it as fair condition habitat. This is incorrect.

30.16 Page 74, Table 3-6, Smelter Mountain Allotment: The DEIS lists prior stable elk numbers for this allotment. It is very questionable that elk were ever present there or that they ever will be.

30.17 Page 74, Table 3-6, Summit Allotment: This allotment is not in the Central Region, yet BLM states the Central Region classified the critical deer winter habitat condition as poor. This is incorrect.

30.18 Page 75, Table 3-6, Tatow Allotment: It was jointly agreed by HRRA personnel and CRO UDWR personnel that there were currently 1300 wintering deer in this allotment due to migration from the Sheeprock Mountains. The table shows only 270 wintering deer.

30.19 Page 76, Paragraph 3: Peregrine falcons have been observed in the resource area. Recorded sighting locations include the Fish Springs Waterfowl Management Area and the eastern portion of the resource area along the Wasatch-Nebo front. They undoubtedly also occur in marsh areas in Snake Valley during migration. Utah's wintering bald eagle populations prefer sagebrush valley areas with high populations of black-tailed jackrabbits which

Page Four
Attachment

30.19 cont. are the primary prey for wintering bald eagles in Utah. The UDWR can make available approximate numbers of wintering bald eagles in the resource area from annual winter counts for the last several years.

30.20 Page 76, Paragraph 8: Both the Swainson's hawk and the ferruginous hawk nest in the resource area. Birds are banded in the area annually.

30.21 Page 84, Table 3-8: The Leland Harris Springs complex should also be included.

30.22 Page 84, Paragraph 3, Line 12: As stated previously, 1300 deer use the Tatow Allotment during the winter.

30.23 Page 85, Paragraph 7, Line 6: Rocky Mountain bighorn sheep should be added as a major wildlife species found on the mountain range.

Page 86, Paragraph 1: It is believed that there may be a number of other caves throughout the mountain ranges in the West Desert. The locations of many of these caves are known only to people who regularly visit and explore the area. This information is generally not offered to the managing agency due to potential problems with vandalism. Once the information is in the BLM files, it may be accessed via the Freedom of Information Act, unless special arrangements have been made to authorize confidentiality of those files. Because caves are unique, non-renewable resources, people who know the whereabouts of cave entrances are reluctant to divulge this information and see it placed in public files.

30.24 Many areas around the nation have dealt with this problem as it relates to caves by obtaining special authority to exclude specific cave locations and names from public accessibility. In order to get this information from spelunkers, BLM should set up a system that will guarantee that access to location information be limited. Knowledge of cave locations could be passed on by the local caving groups (local grottos of the National Speleological Society (NSS). In this way "new" cavers looking for such information would be exposed to a group that has amassed a considerable amount of experience in cave trips and who promotes safety and conscientious use of the resource.

It is recommended that the BLM make a concerted effort to involve the local grottos of the NSS both in developing management plans and in daily usage of the caves. Their expertise would be invaluable, and it is likely that a number of cave improvement projects (entrance gating, access planning, etc.) could be completed with the volunteer labor available from these groups.

30.25 Page 86, Paragraph 3: The DEIS notes that "a description of each recreation resource[s], in terms of their potential for special management designation, is found in the Lands section." The only description appears in Table 3-11. A more complete description would be very helpful as well as an explanation of the various special designations, i.e., Recreation Lands areas under the Outdoor Recreation Resources Review Commission classification, Outstanding Natural Areas and Research Natural Areas. Inclusion of these terms in the glossary would be adequate.

Page Five
Attachment

IV. Chapter 4 Comments

30.26 Page 124 and 125: These pages need to be reversed.

30.27 Page 125, Paragraph 4 under Alternative A, Line 17: The ranges could become unusable to antelope as well

30.28 Page 127, Paragraph 10, Line 2: Provision should be made to include preferred browse and forb species rather than straight perennial grassland seedings in big game winter range areas.

Page 129, Paragraph 5, Line 4: Preferred browse and forb species should be included in these rangeland seedings where they occur in big game winter range areas.

30.29 Page 134, Threatened and Endangered Species: Critical habitat for bald eagles in the resource area is not lakes, reservoirs and marshes. Wintering bald eagles in the resource area are tied closely to desert sagebrush areas with black-tailed jackrabbit populations.

30.30 Page 135, Paragraph 5: Any alternative that allows for overgrazing of vegetation utilized by raptor prey species such as black-tailed jackrabbit, desert cottontail, kangaroo rat, etc. will have adverse impacts on all raptor populations.

30.31 Page 140, Alternative D: Gandy Mountain Caves has been identified as both a proposed ACEC and as a SRMA (see page 145). Which is the correct proposal?

**30.1** The effects of overgrazing, should it occur, on different vegetation associations in the raptor prey base in the HRRA has not been determined.

**30.2** Refer to Appendix 8 and Table 2-22 in this Final RMP/EIS for the correct current AUM allocations. The numbers have been corrected to conform to a previous agreement with UDWR.

**30.3** The decision has been made to improve riparian habitat. Protection measures, such as fencing, deferment, or other methods, will be designed and applied where improvement is warranted. Also, the habitat needs have not been determined for all involved species. Refer to Comment Response 20.10.

**30.4** This EIS attempts to analyze a wide range of reasonable alternatives. Each alternative is designed to favor some resources, such as recreation, while de-emphasizing others. Alternative B favors Special Recreation Management Areas, including Swasey Mountain; however, BLM believes the preferred Alternative D is a better mix of resources. Swasey Mountain was considered of lesser priority than the recreation sites proposed. Additionally, it was recognized that Swasey Mountain is currently managed under the BLM IMP. Also, refer to Comment Response 17.3.

**30.5** Areas on BLM-administered lands, such as the Little Sahara Recreation Area, have been established where ORV activities may be pursued. We appreciate the assistance given to us by the Off-Highway Vehicle Advisory Council. All-terrain vehicle (ATV) accidents have decreased significantly within Little Sahara since we solicited their assistance. We would appreciate any assistance the Human Powered Advisory Council may also be able to provide.

**30.6** The legend in Figure 2-1 of the Draft RMP/EIS has been updated to show the dotted pattern representing the "M" category allotments. Refer to Figure 2-5 of this Final RMP/EIS.

**30.7** Table 2-4 has been revised (refer to Table 2-17 of this Final RMP/EIS). The suggested column showing "Actual Licensed Use" has not been added to this table; however, it has been added to Appendix 8 in this Final RMP/EIS.

**30.8** The reference to Table 2-3 of the Draft RMP/EIS has been corrected to reference Table 2-4. Refer to the Errata section of this Final RMP/EIS.

**30.9** On Page 45 of the Draft RMP/EIS, the sentence should read, "Wildlife species found in the area include mule deer, antelope, elk, bighorn sheep, sage grouse, chukars, and raptors. Refer to the Introduction in the Wildlife section of this Final RMP/EIS.

**30.10** Refer to Letter Response 30.9. Bighorn sheep have been included as a major species in the area. Refer to the Introduction in the Wildlife section of this Final RMP/EIS.

**30.11** The reference to Figure 2-3 in the Draft RMP/EIS has been corrected to reference Figure 2-2. Refer to the Errata section of this Final RMP/EIS.

**30.12** The Range Condition section presented in the Draft RMP/EIS is a discussion of "ecological condition" as it pertains to the various vegetation associations in each grazing allotment. "Range forage condition," based on native range production (lbs. forage/acre), is not discussed in this section.

Since 1982, the BLM's emphasis in monitoring range condition has been to evaluate present plant community composition on a range site in relation to the natural potential plant community for the site. This method allows us to evaluate plant community structure, particularly in regard to how well "key forage species" are represented in a community. Our monitoring studies relate to this method as we evaluate grazing utilization on key species and monitor the composition shifts of these key species through trend studies.

Although the BLM does not use range productivity data as a direct method of determining range condition, forage productivity is used in determining initial grazing allocation levels. Additionally, the levels of forage production are monitored, along with grazing use, to refine the initial stocking estimates.

**30.13** The correction has been made on Figure 2-10 and on Table 2-22 of this Final RMP/EIS.

**30.14** The correction has been made on Table 2-22 of this Final RMP/EIS.

**30.15** The Round Valley Allotment is in the Southern Region of UDWR. The critical elk habitat is correctly identified.

**30.16** The correction has been made on Table 2-22 of this Final RMP/EIS.

**30.17** The Summit Allotment is in the Southern Region of UDWR. Critical deer winter habitat is correctly identified. Refer to Table 2-22 of this Final RMP/EIS.

**30.18** BLM agreed that 1,590 wintering deer migrated from the Sheeprock Mountains toward the Tatow Allotment, but we distributed the numbers as follows:

| Allotment | Number |
|---|---|
| Antelope | 250 |
| Freighter | 20 |
| Lady Laird | 100 |
| Little Drum | 80 |
| Sand Pass | 40 |
| Swasey Knoll | 50 |
| Tatow | 950 |
| Riverbed | 100 |
| Total | 1,590 |

Table 2-22 of this Final RMP/EIS contains these corrections.

**30.19** This correction has been made in this Final RMP/EIS.

**30.20** The distribution and abundance of the Swainson and ferruginuous hawks are difficult to determine. BLM does not have any data on nesting of these species in the HRRA. BLM would appreciate up-to-date information in order to assist us in our planning process and habitat management.

**30.21** The Leland Harris Spring Complex and Central Spring are located on a State section and are not managed by the BLM. They have been deleted from the map in Figure 2-19 of this Final RMP/EIS.

**30.22** Refer to Comment Response 30.18.

**30.23** The text of this Final RMP/EIS has been amended to read: "Mule deer, mountain lion, antelope, bighorn sheep, grouse, and chukar are among the major wildlife species found on the mountain range."

**30.24** BLM recognizes the Utah grottos' of the National Speleological Society expertise in both conservation and safety. We have long enjoyed a working relationship with the National Speleological Society in the administration of West Desert caves, and look forward to their assistance in the development of site-specific Cave Management Plans. Our cooperative association with local grottos of the National Speleological Society will be directed by the June 1984 Memorandum of Understanding between BLM; the National Speleological Society; and the Cave Research Foundation.

**30.25** Table 2-1 on Page 14 of the Draft RMP/EIS describes each recreation resource and provides an overview of the various special designations. It also identifies the areas which do not meet any special designation criteria. Text has been amended in the Proposed Action section of Lands in Chapter 2 of this Final RMP/EIS.

**30.26** The error is recognized; however, it is 125 and 126 which are reversed.

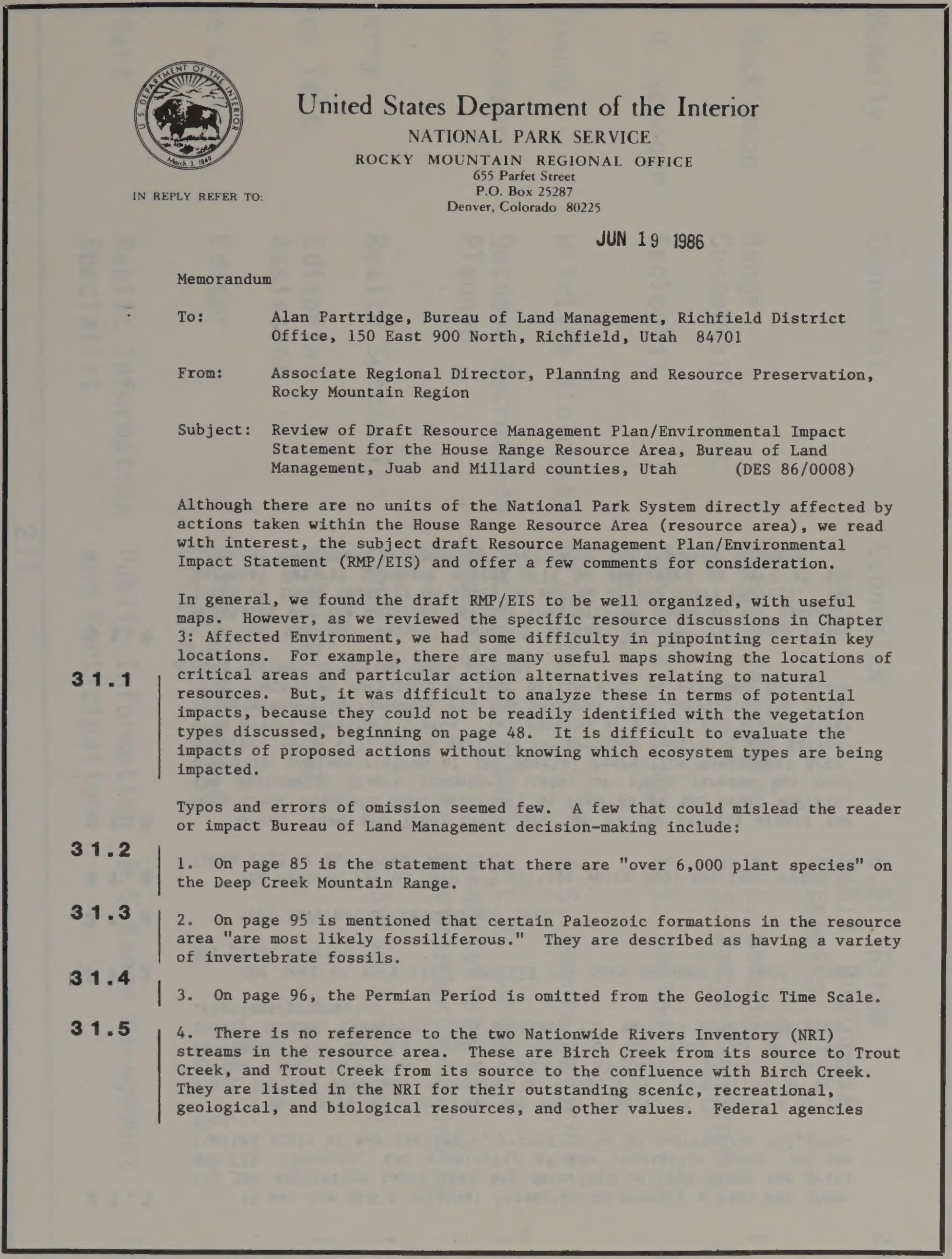
**30.27** The sentence in paragraph 4 in the Vegetation section is correct. The sentence you suggested has been added on Page 134 of the Draft RMP/EIS. It says, "Over the long term (20 years), these ranges could become unusable to antelope because of the loss of key forage species." Refer to Errata section of this Final EMP/EIS.

**30.28** A diverse mix of grass, forb, and browse species are included in all seed prescriptions for rehabilitating sites involving big game habitat. These diverse seed mixtures are used on nearly all reseeding projects including fire rehabilitation. Browse species, in particular, have met with only varying degrees of success and are usually the most difficult to get established. Seed availability has been often a limiting factor, especially in regard to native browse species.

**30.29** No Federally designated critical habitat for bald eagles is in the HRRA. Based on records obtained during the mid-winter bald eagle survey, important habitat for bald eagles includes reservoirs like Scipio Lake and Yuba Dam. Other important habitat areas do include sagebrush which provide habitat for blacktailed jackrabbits, the chief prey base for the bald eagle and golden eagle. This last point has been included in the Introduction of the Wildlife section of this Final RMP/EIS.

**30.30** The effects of overgrazing on different vegetation associations in the raptor prey base in the HRRA has not been determined.

**30.31** Gandy Mountain Caves have been proposed for designation as an ACEC. Should this area be so designated, it would also be administratively identified as a Special Recreation Management Area for future funding.



United States Department of the Interior
NATIONAL PARK SERVICE
ROCKY MOUNTAIN REGIONAL OFFICE
655 Parfet Street
P.O. Box 25287
Denver, Colorado 80225

IN REPLY REFER TO:

JUN 19 1986

Memorandum

To: Alan Partridge, Bureau of Land Management, Richfield District Office, 150 East 900 North, Richfield, Utah 84701

From: Associate Regional Director, Planning and Resource Preservation, Rocky Mountain Region

Subject: Review of Draft Resource Management Plan/Environmental Impact Statement for the House Range Resource Area, Bureau of Land Management, Juab and Millard counties, Utah (DES 86/0008)

Although there are no units of the National Park System directly affected by actions taken within the House Range Resource Area (resource area), we read with interest, the subject draft Resource Management Plan/Environmental Impact Statement (RMP/EIS) and offer a few comments for consideration.

In general, we found the draft RMP/EIS to be well organized, with useful
maps. However, as we reviewed the specific resource discussions in Chapter
3: Affected Environment, we had some difficulty in pinpointing certain key
locations. For example, there are many useful maps showing the locations of
31.1 critical areas and particular action alternatives relating to natural
resources. But, it was difficult to analyze these in terms of potential
impacts, because they could not be readily identified with the vegetation
types discussed, beginning on page 48. It is difficult to evaluate the
impacts of proposed actions without knowing which ecosystem types are being
impacted.

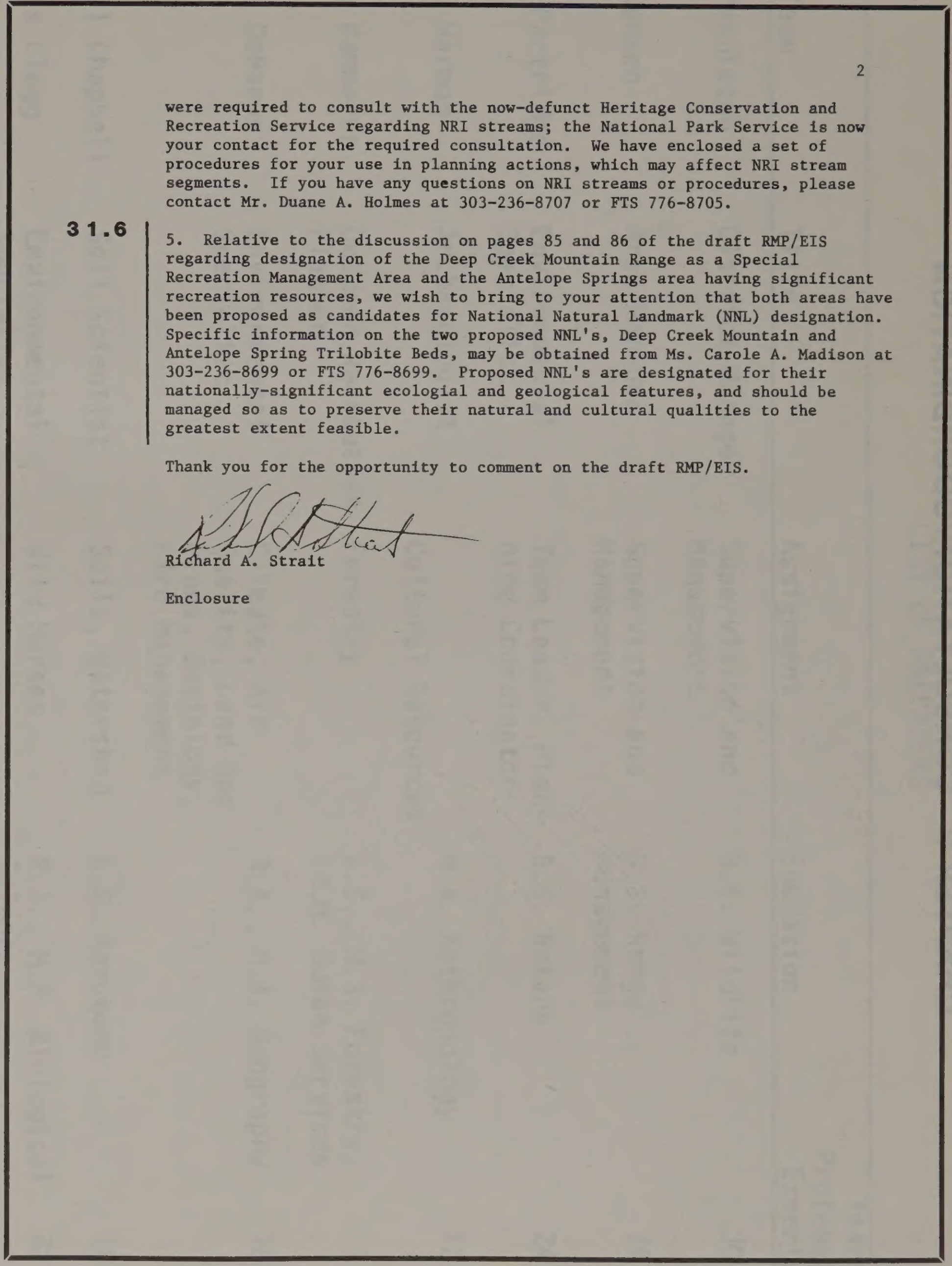
Typos and errors of omission seemed few. A few that could mislead the reader or impact Bureau of Land Management decision-making include:

31.2 1. On page 85 is the statement that there are "over 6,000 plant species" on the Deep Creek Mountain Range.

31.3 2. On page 95 is mentioned that certain Paleozoic formations in the resource area "are most likely fossiliferous." They are described as having a variety of invertebrate fossils.

31.4 3. On page 96, the Permian Period is omitted from the Geologic Time Scale.

31.5 4. There is no reference to the two Nationwide Rivers Inventory (NRI) streams in the resource area. These are Birch Creek from its source to Trout Creek, and Trout Creek from its source to the confluence with Birch Creek. They are listed in the NRI for their outstanding scenic, recreational, geological, and biological resources, and other values. Federal agencies



were required to consult with the now-defunct Heritage Conservation and Recreation Service regarding NRI streams; the National Park Service is now your contact for the required consultation. We have enclosed a set of procedures for your use in planning actions, which may affect NRI stream segments. If you have any questions on NRI streams or procedures, please contact Mr. Duane A. Holmes at 303-236-8707 or FTS 776-8705.

31.6 5. Relative to the discussion on pages 85 and 86 of the draft RMP/EIS regarding designation of the Deep Creek Mountain Range as a Special Recreation Management Area and the Antelope Springs area having significant recreation resources, we wish to bring to your attention that both areas have been proposed as candidates for National Natural Landmark (NNL) designation. Specific information on the two proposed NNL's, Deep Creek Mountain and Antelope Spring Trilobite Beds, may be obtained from Ms. Carole A. Madison at 303-236-8699 or FTS 776-8699. Proposed NNL's are designated for their nationally-significant ecologial and geological features, and should be managed so as to preserve their natural and cultural qualities to the greatest extent feasible.

Thank you for the opportunity to comment on the draft RMP/EIS.

Richard A. Strait

Enclosure

# Response Letter 31

**31.1** It was the BLM's original intention to prepare a base map showing the vegetation types that are described on Page 48 of the Draft RMP/EIS. However, the complexity of the vegetation types, on the limited scale of map available, proved to be an ineffective illustration.

It must also be noted that the major impacts in Chapter 4 of the Draft RMP/EIS were not discussed on a specific "vegetation or ecosystem" type basis but on a "grazing allotment" basis. Grazing allotments are defined historical areas of use that can be effectively tested, evaluated, and analyzed for various management prescriptions/proposals.

**31.2** The text of this Final RMP/EIS has been amended to read, "over 600 plant species."

**31.3** Your information matches our text.

**31.4** The Permian Period (270 + 5 million years ago) has been added to Table 2-25 of this Final RMP/EIS.

**31.5** Birch Creek and Trout Creek are two of the streams within the Deep Creek Mountain SRMA described on Page 85 of the Draft RMP/EIS. The Nationwide Rivers Inventory status of these streams has been added to the description of the Special Recreation Management Area. However, there will be no analysis or decision regarding the Nationwide Rivers Inventory status. Designation as a Wild and Scenic River is determined by Congress and the National Park Service. The planning procedures furnished by your office will be reviewed for planning actions affecting these streams.

**31.6** The National Natural Landmark nominations for the Deep Creek Mountains and the Antelope Springs area will be added to the descriptions of these features on pages 85 and 86 of the Draft RMP/EIS. The National Natural Landmark status will be evaluated as part of the "Special Management Designation" section of the planning document.

# LIST OF PREPARERS

| EIS Team | Title | Assignment | Education | Years of Professional Experience |
|---|---|---|---|---|
| Don Pendleton | District Manager | Supervision and Management | B.S. Wildlife | 30 |
| Tom Jensen | Area Manager | Supervision and Management | B.S. Range Management | 24 |
| Alan Partridge | Environmental Specialist | Team Leader, Planning Coordinator | B.S. Botany | 24 |
| Craig Harmon | Archaeologist | Cultural Resources | M.A. Anthropology | 12 |
| Wayne Kammerer | Outdoor Recreation Planner | Forestry | B.S., M.S. Forestry,<br>Ed.M. Human Services | 7 |
| Duane DePaepe | Environmental Specialist | Climate, Air Quality, Land Use Plans, Sociology, Fire Management | B.A., M.A. Geography | 18 |
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| Craig MacKinnon | Range Conservationist | Range, Vegetation | B.S. Botany<br>B.S. Range Management | 11 |
| Scott D. Spooner | Geologist | Minerals, Geology, Topography | B.S. Geology | 4 |
| Dave Young | Wildlife Biologist | Wildlife | A.S. General Science | 6 |
| Stew Jacobson | Outdoor Recreation Planner | Recreation, Visual Resources | B.L.A. Landscape Architecture and Environmental Planning | 15 |
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| Shirley Taft | Editorial Assistant | Editing, Typing | | 15 |
| Elaine Larsen | Editor | Editing, Mockup, Printing | | 10 |
| Bert Hart | Public Information Specialist | Public Information and Participation | B.S.Range Management | 12 |

# LIST OF PREPARERS

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| | | |
|---|---|---|
| Harvey D. Gates | House Range Resource Area | Range Conservationist |
| Brent D. Crosland | House Range Resource Area | Range Technician |
| E. Birrell Hirschi | House Range Resource Area | Surface Protection Specialist |
| Mark A. Pierce | House Range Resource Area | Wildlife Management Biologist |
| Grant Hardy | House Range Resource Area | Range Technician |
| Philip Zieg | Richfield District Office | Soil Conservationist |

# APPENDIX 1

## Rangeland Value Inventory and Monitoring System
(Developed by Thomas L. Jensen, HRRA)

Since 1982, the BLM has been shifting the focus of rangeland inventories to the Ecological Site Inventory Method described in the SCS National Range Handbook and BLM National Range Handbook Supplement (H 4410-1). The major sampling unit under this method is the "range site," a topographic unit containing a soil type or group of soils that sustain a distinctive plant community.

The HRRA has adopted an inventory procedure known as the Rangeland Value Inventory and Monitoring System (RVIMS) that correlates with range sites but utilizes a different sampling unit known as a "vegetation association or class." Vegetation associations are representative plant communities that are denoted by one or more dominant species, such as big sagebrush-rabbitbrush, and may embody one or more range sites. Shown below in Table 1 are the 19 vegetation associations/classes that have been identified in the HRRA and the 31 corresponding range sites that comprise these associations:

As shown in Appendix Table 1, vegetation associations/classes are primarily derived from the major vegetation types. Key (representative) areas are selected within vegetation type boundaries and are located by ocular estimate of plant composition, cover, rockiness and livestock grazing use patterns in the area. The compiled data from the key areas is used to delineate vegetation types into the specific associations/classes.

To obtain a continuous and representative sampling of the vegetation throughout the resource area, permanent transects have been established in all of the 19 vegetation associations/classes (the locations of these transects are identified on overlays in the resource area files). Presently, there have been 370 permanent transects established (333 on native range and 37 on seedings). Each transect consists of three integrated studies; a 3x3 or 5x5 square foot photo plot, a pace transect, and a plot frame transect (consisting of one hundred 3.14 sq. ft. circular plots placed 5.7 ft. apart on a linear axis [total 570 ft.]).

The information obtained from the transects is being used to establish a comprehensive data base. Below is a brief description of the type of data that is collected for each transect and how that data is used:

| Information Collected | Applied Uses |
|---|---|
| Edaphic factors (soils data)-record the amount or presence of bare ground, rocks, gravel, litter and crytograms (lichens). Estimates are also recorded for effective root depth (ERD), available water capacity (AWC), soil surface factors (SSF), kind of parent material (if known), soil texture and permeability. | These types of edaphic factors often affect, influence or limit vegetation production (yield) in some manner. Therefore, they are recorded and analyzed, and an overall soil index rating is assigned that is used as a factoring value in determining average annual yield. |

# APPENDIX 1

## TABLE 1

### House Range Resource Area Vegetation Associations/Classes

| Vegetative Type and Association | Class | Range Site[a] |
|---|---|---|
| Grassland | | |
| 1. Seedings | 1. Less than 650 lbs/ac yield. | 19 22 27 |
| 2. | More than 650 lbs/ac yield. | 27 26 22 |
| 2. Native | 1. Desert. | 5 2 |
| 2. | Saline meadows. | 10 |
| 3. | Upland. | 26 27 28 |
| Sagebrush | | |
| 3. Big sagebrush-various | | 19 26 |
| 4. Big sagebrush-rabbitbrush | | 27 |
| 5. Big sagebrush-juniper | | 24a |
| 6. Big sagebrush-bitterbrush (cliffrose) | 28 | |
| 7. Big sagebrush-black sagebrush | | 22 23 |
| 8. Black sagebrush | 1. Surface rock less than 40 percent. | 22 |
| | 2. Surface rock more than 40 percent. | 24 |
| 9. Big sagebrush-oak brush | | 22a 28 29 |
| 10. Mountain Shrub | | |
| 11. Conifer | | |
| 12. Pinyon-Juniper | | 22a 25 |
| 13. Broadleaf trees | | |
| Saltbush | | |
| Shadscale | | |
| 14. Shadscale-budsage | 1. Surface rock/ gravel less than 20 percent. | 8 14 |
| | 2. Surface rock/ gravel more than 20 percent. | 1 |
| 15. Shadscale-rabbitbrush | | 18 8 |
| 16. Shadscale-winterfat | | 6 15 21 |
| 17. Shadscale-Galleta grass | 1. Surface rock/ gravel less than 20 percent. | 14 18 |
| | 2. Surface rock/ gravel less than 40 percent. | 7 14 |
| | 3. Surface rock/ gravel less than 60 percent. | 9 18 |
| | 4. Surface rock/ gravel 60 percent or more. | 16 17 18 |
| Greasewood | | 12 3 |

# APPENDIX 1

| Vegetative Type and Association | Class | Range Site[a] |
|---|---|---|
| 18. Desert shrub (or grassland)<br>(Galleta grass more than 25 percent)<br>(Horsebrush more than 9 percent)<br>(Shadscale less than 20 percent) | | 13 20 14 |
| 19. Annuals | | 23 24 |

*These numbers correspond to the numbered range sites depicted below:

1. Desert alkali bench
2. Desert alkali sand loam
3. Desert alkali flat
4. Desert alkali loamy sand
5. Desert alkali sand
6. Desert flat
7. Desert gravelly loam
8. Desert loam
9. Desert shallow loam
10. Semi-wet alkali flat
11. Desert salt flat
12. Alkali flat
13. Desert sand
14. Desert sandy loam
15. Desert silt flat
16. Desert stony hill
17. Desert stony hill
18. Desert gravelly sandy loam
19. Semidesert loam
20. Semidesert sand
21. Semidesert sandy loam
22. Semidesert shallow loam

22a. Semidesert very shallow loam

23. Semidesert stony hill
24. Semidesert stony loam

24a. Semidesert gravelly loam

25. Upland gravelly loam
26. Upland loam
27. Upland shallow loam
28. Upland stony loam
29. Upland stony loam (pinyon-juniper)

[a] There is a description of these range sites in the resource area files. Although a few more range sites have been identified, they occur infrequently. An example is the mountain soils (mountain loam) of the Deep Creek Mountains.

# APPENDIX 1

| Information Collected | Applied Uses |
|---|---|
| Vegetation yield data - estimates of plant cover and composition are taken. (Estimates of annual forage yield (lbs/acre) may also be taken as a check using the weight estimate method). | Plant composition and foliar cover are analyzed in conjunction with proper use factors, available precipitation data and the above soil indexes to determine the expected average yield per unit of precipitation (lbs/ac/in). (NOTE: The method of how soil indexes are determined and how cover estimates and composition are used to establish yield is explained in detail in the Rangeland Value Inventory and Monitoring Systems Manual). |
| Other vegetation data-measurements are taken of plant frequency, composition, foliar cover density, age, form class and utilization by livestock. | These types of data are primarily used in determining plant dominance and subdominance, evaluating range condition, range trend and in monitoring livestock use. |

The types of data and their applications, as shown above, are discussed in more detail in the RVIMS manual.

The RVIMS inventory procedure, as it was designed, provides important baseline vegetation/soil/livestock information to the resource manager upon which he/she may base grazing allocation, and other resource decisions. The procedure's major advantage is that it provides a comprehensive data base of measurable environmental factors and indexes that may be used in estimating average annual yield on any given site. As study data accumulates (this is the second year in a baseline schedule of at least 5 years) refinements in the specific mapping of vegetation associations can be made, as well as more precise estimates of yield for those sites.

# APPENDIX 1

## Method of Determining Noncompetitive Forage Available to Big Game Animals

To determine noncompetitive forage available for deer and elk, the average forage production was calculated, based on a suitability rating for each vegetation association used by these animals. This suitability rating is based on a number of factors, paramount of which are established proper use factors. It is recognized that when proper use has been made by livestock on certain key species within a site, not all plant species on the site are fully utilized to their proper levels. The forage that remains available and usable to big game on the site is considered to be noncompetitive forage, in-so-far as it meets the requirements and preference of their diet.

Where RVIMS transects have not been established in big game habitat areas, carrying capacity is based on an average rating of the type for wildlife. This rating includes noncompetitive forage and the available forage found in rough and inaccessible sites where wildlife use occurs. The following table of values was used to determine the amount of noncompetitive AUMs for the major associations:

| Vegetation Association Number and Name | | Acres per AUM |
|---|---|---|
| 1-11, 1-12 | Seeding | 29.6 |
| 4-1 | Big sagebrush-various | 17.4 |
| 4-2 | Big sagebrush-rabbitbrush | 18.2 |
| 4-3 | Big sagebrush-juniper | 22.9 |
| 4-4 | Big sagebrush-bitterbrush (cliffrose) | 22.9 |
| 4-5 | Big sagebrush-black sagebrush | 27.6 |
| 4-61 | Black sagebrush (low rock) | 21.6 |
| 4-62 | Black sagebrush (high rock) | 21.1 |
| 4-7 | Big sagebrush-oakbrush | 28.6 |
| 5 | Mountain shrub | 21.1 |
| | Rough and inaccessible | 80.0 |

These values were only used to determine noncompetitive AUMs of forage on key grazing sites where deer and/or elk use was apparent. Therefore, these values were established for sites in the Tintic Planning Unit and were not established in the West Desert, Topaz unit, the majority of use is by antelope and is very dispersed and difficult to discern.

These values shown in the preceeding table provide a good respresentation of the noncompetitive forage available for the deer and elk in the eastern portion of the resource area. These estimates may not be precise enough to reflect the total values of noncompetitive forage within each grazing allotment. However, they are believed to be as accurate as the estimated big game populations that are found in the allotments.

## APPENDIX 2

### Average Costs and Returns for Small Beef Herds (0-99 Cows), House Range Resource Area, 1982

| Item | Unit | Number | Average Weight | Price CWT | Total Value |
|---|---|---|---|---|---|
| Sales: | | | | | |
| Steer Calves | Head | 12 | 420 | $65.44 | $3,298 |
| Heifer Calves | Head | 7 | 385 | 56.00 | 1,509 |
| Yearling Steers | Head | 5 | 700 | 59.75 | 2,091 |
| Yearling Heifers | Head | 5 | 625 | 53.95 | 1,686 |
| Cull Cows | Head | 4 | 950 | 37.71 | 1,433 |
| Total Sales | Dol. | | | | 10,017 |
| Total Per Cow | Dol. | | | | 209 |

| Item | Unit | Number | Price | Value/ Cow | Total Value |
|---|---|---|---|---|---|
| Cash Costs: | | | | | |
| Federal Grazing Fee[a] | AM | 193 | 1.86 | 7.48 | 359 |
| Private Pasture Lease | AUM | -- | -- | -- | -- |
| State Land Lease | AUM | -- | -- | -- | -- |
| Irrigated Pasture | AUM | -- | -- | -- | -- |
| Hay Produced | Ton | 68.6 | 40.71 | 58.19 | 2,793 |
| Protein Supplement | Ton | 3.8 | 199.0 | 15.75 | 756 |
| Salt and Mineral | CWT | 17.3 | 4.85 | 1.75 | 84 |
| Vet. and Medicine | Dol. | -- | -- | 6.02 | 289 |
| Hired Trucking | Dol. | -- | -- | 6.23 | 299 |
| Marketing | Dol. | -- | -- | 2.67 | 128 |
| General Overhead | Dol. | -- | -- | 10.10 | 485 |
| Hired Labor | Hrs. | 36.0 | 4.22 | 3.17 | 152 |
| Fuel/Lubricants | Dol. | -- | -- | 21.10 | 1,013 |
| Repairs | Dol. | -- | -- | 15.54 | 746 |
| Taxes | Dol. | -- | -- | 6.60 | 317 |
| Insurance | Dol. | -- | -- | 4.46 | 214 |
| Interest on Operating Capitol | Dol. | 3,320.1 | 0.15 | 10.23 | 491 |
| Total Cash Costs | Dol. | -- | -- | 169.20 | 8,126 |
| Other Costs: | | | | | |
| Family Labor | Hrs. | 625.0 | 4.22 | 54.96 | 2,638 |
| Capital Replacement | Dol. | -- | -- | 44.94 | 2,157 |
| Interest on Investment Other Than Land | Dol. | -- | -- | 98.50 | 4,728 |
| Interest on Land | Dol. | -- | -- | 210.77 | 10,117 |
| Total Other Costs | Dol. | -- | -- | 409.17 | 19,640 |
| Total All Costs | Dol. | | | 578.46 | 27,766 |
| Return Above Cash Costs | Dol. | -- | -- | 39.40 | 1,891 |
| Return Above Cash Costs and Family Labor | Dol. | -- | -- | -15.55 | -747 |
| Return to Total Investment[b] | Dol. | | | -60.50 | -2,904 |
| Return to Land[c] | Dol. | | | -159.00 | -7,632 |

Source: USDA, Economic Research Service, 1982.

[a] Includes both Forest Service and BLM grazing fees.

[b] Return above cash costs and family labor minus capital replacement.

[c] Return to total investment minus interest on investment other than land.

# APPENDIX 3

## APPENDIX 3

### Average Costs and Returns for Medium Beef Herds (100-499 Cows), House Range Resource Area, 1982

| Item | Unit | Number | Average Weight | Price CWT | Total Value |
|---|---|---|---|---|---|
| Sales: | | | | | |
| Steer Calves | Head | 48 | 420 | $65.44 | $13,193 |
| Heifer Calves | Head | 27 | 385 | 56.00 | 5,821 |
| Yearling Steers | Head | 20 | 700 | 59.75 | 8,365 |
| Yearling Heifers | Head | 15 | 625 | 53.95 | 5,058 |
| Cull Cows | Head | 21 | 950 | 37.71 | 7,523 |
| Total Sales | Dol. | | | | 39,960 |
| Total Per Cow | Dol. | | | | 204 |

| Item | Unit | Number | Price | Value/ Cow | Total Value |
|---|---|---|---|---|---|
| Cash Costs: | | | | | |
| Federal Grazing Fee[a] | AM | 980.0 | 1.86 | 9.30 | 1,823 |
| Private Pasture Lease | AUM | -- | -- | -- | -- |
| State Land Lease | AUM | -- | -- | -- | -- |
| Irrigated Pasture | AUM | -- | -- | -- | -- |
| Hay Produced | Ton | 465.6 | 40.71 | 96.71 | 18,955 |
| Protein Supplement | Ton | 21.0 | 199.00 | 21.32 | 4,179 |
| Salt and Mineral | CWT | 68.6 | 4.85 | 1.70 | 333 |
| Vet. and Medicine | Dol. | -- | -- | 4.70 | 921 |
| Hired Trucking | Dol. | -- | -- | 1.28 | 250 |
| Marketing | Dol. | -- | -- | 0.87 | 170 |
| General Overhead | Dol. | -- | -- | 10.20 | 2,000 |
| Hired Labor | Hrs. | 500.0 | 4.22 | 10.77 | 2,110 |
| Fuel/Lubricants | Dol. | -- | -- | 4.79 | 938 |
| Repairs | Dol. | -- | -- | 6.14 | 1,204 |
| Taxes | Dol. | -- | -- | 5.23 | 1,026 |
| Insurance | Dol. | -- | -- | 3.97 | 778 |
| Interest on Operating Capitol | Dol. | 16,299.5 | 0.15 | 12.31 | 2,412 |
| Total Cash Costs | Dol. | -- | -- | 189.28 | 37,099 |
| Other Costs: | | | | | |
| Family Labor | Hrs. | 1,500.0 | 4.22 | 32.30 | 6,330 |
| Capital Replacement | Dol. | -- | -- | 23.94 | 4,693 |
| Interest on Investment Other Than Land | Dol. | -- | -- | 85.21 | 16,701 |
| Interest on Land | Dol. | -- | -- | 207.61 | 40,691 |
| Total Other Costs | Dol. | -- | -- | 349.06 | 68,415 |
| Total All Costs | Dol. | | | 538.34 | 105,514 |
| Return Above Cash Costs | Dol. | -- | -- | 14.60 | 2,861 |
| Return Above Cash Costs and Family Labor | Dol. | -- | -- | -17.70 | 3,469 |
| Return to Total Investment[b] | Dol. | | | -41.64 | -8,162 |
| Return to Land[c] | Dol. | | | -126.85 | -24,863 |

Source: USDA, Economic Research Service, 1982.

[a] Includes both Forest Service and BLM grazing fees.

[b] Return above cash costs and family labor minus capital replacement.

[c] Return to total investment minus interest on investment other than land.

# APPENDIX 4

## APPENDIX 4

### Average Costs and Returns for Large Beef Herds (500-or more Cows), House Range Resource Area, 1982

| Item | Unit | Number | Average Weight | Price CWT | Total Value |
|---|---|---|---|---|---|
| **Sales:** | | | | | |
| Steer Calves | Head | 190 | 420 | $65.44 | $52,221 |
| Heifer Calves | Head | 105 | 385 | 56.00 | 22,638 |
| Yearling Steers | Head | 88 | 700 | 59.75 | 36,806 |
| Yearling Heifers | Head | 70 | 625 | 53.95 | 23,603 |
| Cull Cows | Head | 84 | 950 | 37.71 | 30,093 |
| Total Sales | Dol. | | | | 165,361 |
| Total Per Cow | Dol. | | | | 199 |

| Item | Unit | Number | Price | Value/ Cow | Total Value |
|---|---|---|---|---|---|
| **Cash Costs:** | | | | | |
| Federal Grazing Fee[a] | AM | 4,592.0 | 1.86 | 10.28 | 8,541 |
| Private Pasture Lease | AUM | -- | -- | -- | -- |
| State Land Lease | AUM | -- | -- | -- | -- |
| Irrigated Pasture | AUM | -- | -- | -- | -- |
| Hay Produced | Ton | 1,456.2 | 40.71 | 71.34 | 59,282 |
| Protein Supplement | Ton | 38.0 | 199.0 | 9.10 | 7,562 |
| Salt and Mineral | CWT | 190.8 | 4.85 | 1.11 | 925 |
| Vet. and Medicine | Dol. | -- | -- | 5.25 | 4,363 |
| Hired Trucking | Dol. | -- | -- | 3.50 | 2,908 |
| Marketing | Dol. | -- | -- | 0.96 | 800 |
| General Overhead | Dol. | -- | -- | 5.50 | 4,570 |
| Hired Labor | Hrs. | 6,000.0 | 4.22 | 30.47 | 25,320 |
| Fuel/Lubricants | Dol. | -- | -- | 3.22 | 2,673 |
| Repairs | Dol. | -- | -- | 8.17 | 6,786 |
| Taxes | Dol. | -- | -- | 3.35 | 2,787 |
| Insurance | Dol. | -- | -- | 4.03 | 3,353 |
| Interest on Operating Capitol | Dol. | -- | 0.15 | 11.63 | 9,662 |
| Total Cash Costs | Dol. | | | 167.91 | 139,532 |
| **Other Costs:** | | | | | |
| Family Labor | Hrs. | 3,500.0 | 4.22 | 17.77 | 14,770 |
| Capital Replacement | Dol. | -- | -- | 28.86 | 23,984 |
| Interest on Investment Other Than Land | Dol. | -- | -- | 82.15 | 68,264 |
| Interest on Land | Dol. | -- | -- | 126.32 | 104,972 |
| Total Other Costs | Dol. | -- | -- | 255.10 | 211,990 |
| Total All Costs | Dol. | | | 432.01 | 351,522 |
| Return Above Cash Costs | Dol. | -- | -- | 31.08 | 25,829 |
| Return Above Cash Costs and Family Labor | Dol. | -- | -- | 13.31 | 11,059 |
| Return to Total Investment[b] | Dol. | -- | -- | -15.55 | -12,925 |
| Return to Land[c] | Dol. | -- | -- | -97.70 | -81,189 |

Source: USDA, Economic Research Service, 1982.

[a] Includes both Forest Service and BLM grazing fees.

[b] Return above cash costs and family labor minus capital replacement.

[c] Return to total investment minus interest on investment other than land.

# APPENDIX 5

## APPENDIX 5

## Average Costs and Returns for Sheep Interprises (All Sizes), House Range Resource Area, 1982

| Item | Unit | Number | Average Weight | Price CWT | Total Value |
|---|---|---|---|---|---|
| **Sales:** | | | | | |
| Slaughter lambs | Head | 799 | 97 | $48.93 | $37,922 |
| Feeder Lambs | Head | 1,519 | 82 | 49.26 | 61,357 |
| Cull Ewes | Head | 433 | 138 | 10.50 | 6,280 |
| Wool | lbs. | 30,270 | -- | 0.89 | 26,940 |
| Wool Incentive Payments | Dol. | 26,940 | -- | 1.00 | 26,940 |
| Unshorn Lamb Payment | Dol. | 2,021 | -- | 2.74 | 5,538 |
| Total Sales | Dol. | | | | 164,977 |
| Total Value Per Ewe | Dol. | | | | 56 |

| Item | Unit | Number | Price | Value/ Ewe | Total Value |
|---|---|---|---|---|---|
| **Cash Costs:** | | | | | |
| Federal Grazing Fee[a] | AM | 3,393.0 | 1.86 | 2.14 | 6,311 |
| Private Pasture Lease | AUM | 1,493.2 | 9.29 | 4.70 | 13,872 |
| Hay Produced | Ton | 290.5 | 40.71 | 4.00 | 11,826 |
| Grain Produced | Ton | 1,205.0 | 2.51 | 1.02 | 3,025 |
| Protein Supplement | Ton | 4.0 | 199.00 | 0.27 | 796 |
| Salt and Mineral | CWT | 180.0 | 4.85 | 0.30 | 873 |
| Vet. and Medicine | Dol. | -- | -- | 0.41 | 1,200 |
| Marketing | Dol. | -- | -- | 0.16 | 459 |
| Hired Trucking | Dol. | -- | -- | 2.13 | 6,300 |
| Shearing | Dol. | -- | -- | 1.78 | 5,250 |
| Ram Death Loss | Dol. | -- | -- | 0.58 | 1,700 |
| Miscellaneous | Dol. | -- | -- | 1.22 | 3,604 |
| Hired Labor | Hrs. | 5,000.0 | 4.22 | 7.15 | 21,100 |
| Fuel/Lubricants | Dol. | -- | -- | 1.64 | 4,838 |
| Repairs | Dol. | -- | -- | 1.47 | 4,336 |
| Taxes | Dol. | -- | -- | 0.54 | 1,584 |
| Insurance | Dol. | -- | -- | 0.47 | 1,391 |
| General Farm Overhead | Dol. | -- | -- | 1.20 | 3,550 |
| Interest on Operating Capitol | Dol. | 30,603.5 | 0.15 | 1.53 | 4,529 |
| Total Cash Costs | Dol. | | | 36.69 | 96,544 |
| **Other Costs:** | | | | | |
| Family Labor | Hrs. | 3,200.0 | 4.22 | 4.57 | 13,504 |
| Depreciation | Dol. | -- | -- | 6.11 | 18,031 |
| Interest on Investment Other Than Land | Dol. | -- | -- | 12.02 | 35,500 |
| Interest on Land | Dol. | -- | -- | 11.66 | 34,440 |
| Total Other Costs | Dol. | -- | -- | 34.36 | 101,475 |
| Total All Costs | Dol. | | | 67.06 | 198,019 |
| Return Above Cash Costs | Dol. | -- | -- | 23.17 | 68,433 |
| Return Above Cash Costs and Family Labor | Dol. | -- | -- | 18.60 | 54,929 |
| Return to Total Investment[b] | Dol. | | | 12.50 | 35,898 |
| Return to Land[c] | Dol. | | | 0.47 | 1,398 |

Source: USDA, Economic Research Service, 1982.

[a] Includes both Forest Service and BLM grazing fees.

[b] Return above cash costs and family labor minus depreciation.

[c] Return to total investment minus interest on investment other than land.

# APPENDIX 6

## Species List and Proper Use

| No. | Symbol | Scientific Name | Common Name | Proper Use[a] Single Shp. | Single Ctl. | Dual Shp. | Dual Ctl. |
|---|---|---|---|---|---|---|---|
| Desirables | | | | | | | |
| 1. | Orhy | Oryzopsis hymenoides | Indian ricegrass | 50 | 50 | 25 | 25 |
| 2. | Hija | Hilaria jamesii | Galleta (curlygrass) | 40 | 50 | 15 | 35 |
| 3. | Sihy | Sitanion histrix | Squirreltail | 40 | 40 | 20 | 20 |
| 4. | Ararn | Artem. arbuscula nova | Black sagebrush | 50 | 15 | 40 | 10 |
| 5. | Arsp | Artemesia spinescens | Budsage | 50 | 10 | 40 | 10 |
| 6. | Cela | Ceratoides lanata | Winterfat | 50 | 50 | 25 | 25 |
| 7. | Atca | Atriplex canescens | Four-wing saltbush | 50 | 50 | 25 | 25 |
| 8. | POA | Poa spp. | Bluegrass | 50 | 50 | 25 | 25 |
| 9. | Putr | Purshia tridentata | Bitterbrush | 50 | 50 | 30 | 20 |
| 10. | STIPA | Stipa spp. | Needlegrasses | 40 | 50 | 20 | 30 |
| 11. | SPHAE | Sphaeralcea spp. | Globemallow | 50 | 50 | 25 | 25 |
| 12. | Grsp | Grayia spinosa | Hopsage | 40 | 25 | 25 | 15 |
| 13. | Come | Cowania mexicana | Cliffrose | 50 | 20 | 30 | 20 |
| 14. | Agcr | Agropyron cristatum | Crested wheatgrass | 50 | 50 | 25 | 25 |
| 15. | Agde | Agropyron desertorum | Crested wheatgrass | 50 | 50 | 25 | 25 |
| 16. | Agsm | Agropyron smithii | Western wheatgrass | 40 | 50 | 20 | 30 |
| 17. | Agsp | Agropyron spicatum | Bearded wheatgrass | 50 | 50 | 20 | 30 |
| 18. | Agtr | Agrop. trichophorum | Pubes. wheatgrass | 50 | 50 | 20 | 30 |
| 19. | Brin | Bromus inermis | Smooth brome | 50 | 50 | 20 | 30 |
| 20. | Viam | Vicia americana | Vetch | 50 | 40 | 30 | 20 |
| 21. | Mesa | Medicago sativa | Alfalfa | 50 | 50 | 25 | 25 |
| Intermediates | | | | | | | |
| 22. | Atco | Atriplex confertifolia | Shadscale | 20 | 10 | 20 | 10 |
| 23. | Chvi | Chryso. viscidiflorus | Little rabbitbrush | 10 | 5 | 10 | 5 |
| 24. | | Chryso. greenii | | 10 | 5 | 10 | 10 |
| 25. | Brte[b] | Bromus tectorum | Cheatgrass | 20 | 20 | 10 | 10 |
| 26. | Epne | Ephedra nevadensis | Mormon tea | 30 | 30 | 15 | 15 |
| 27. | Artr | Artemesia tridentata | Big sagebrush | 10 | 5 | 10 | 5 |
| 28. | Dist | Distichilis stricta | Inland saltgrass | 10 | 20 | -- | 20 |
| 29. | Spai | Sporobolus airiodes | Alkali sacaton | 10 | 35 | 10 | 25 |
| 30. | Sper | Sporob. cryptandrus | Sand dropseed | 25 | 35 | 15 | 20 |
| 31. | Saka[b] | Salsola kali | Russian thistle | 15 | 15 | 10 | 10 |
| 32. | Arar | Artemesia arbuscula | Bastard sagebrush | 10 | 5 | 10 | 5 |
| 33. | Chna | Chry. nauseosus | Rabbitbrush | 5 | 5 | 5 | 5 |
| 34. | Epvi | Ephedra viridis | Green ephedra | 20 | 20 | 10 | 10 |
| 35. | Koam | Kochia americana | Green molly | 10 | 5 | 5 | 5 |
| 36. | PHLOX | Phlox spp. | Phlox | 5 | 5 | 5 | 5 |
| 37. | LEPTO | Leptodactylon spp. | Pricklygilia | 5 | 5 | 5 | 5 |
| 38. | Save | Sarcobatus vermiculatus | Greasewood | 10 | 10 | 10 | 10 |
| 39. | Trpu | Tridens pulchellus | Fluffgrass | 5 | 5 | 5 | 5 |
| 40. | ERIOG | Eriogonum spp. | Buckwheat | 15 | 15 | 15 | 15 |
| 41. | ASTRA | Astragalus spp. | Loco weed | 5 | 5 | 5 | 5 |
| 42. | Qugo | Quercus gambellii | Gambel oak | 15 | 25 | 10 | 15 |
| 43. | ARIST | Aristida spp. | Three-awn | 5 | 5 | 5 | 5 |
| 44. | HORDE | Hordeum spp. | Foxtail | 5 | 5 | 5 | 5 |
| 45. | SALIC[b] | Salicornia spp. | Pickleweed | 5 | 5 | 5 | 5 |
| 46. | SUAED[b] | Suaeda spp. | Iodine weed | 5 | 5 | 5 | 5 |
| Undesirables | | | | | | | |
| 47. | TETRA | Tetradymia spp. | Horsebrush | | | | |
| 48. | Gusa | Gutierrezia sarothrae | Snakeweed | | | | |
| 40. | Hagl[b] | Halogeton glomeratus | Halogeton | | | | |
| 10. | Juos | Juniperus osteosperma | Juniper | | | | |

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[a] Proper Use Factors as averaged yearlong.

[b] Annuals.

# APPENDIX 7

United States Department of the Interior
FISH AND WILDLIFE SERVICE
AREA OFFICE COLORADO—UTAH
1406 ~~1311~~ FEDERAL BUILDING
125 SOUTH STATE STREET
SALT LAKE CITY, UTAH 84138-1197

IN REPLY REFER TO:

1 November 1983

MEMORANDUM

TO: Area Manager, House Range Area
Bureau of Land Management, Fillmore, Utah

FROM: Field Supervisor, Endangered Species Office,
U. S. Fish and Wildlife Service, Salt Lake City, Utah

SUBJECT: Endangered Species List for House Range Resource Area

We have received your letter of 30 September 1983 concerning the House Range Resource Area Environmental Impact Statement. It appears that listed endangered species and species under review (sensitive or candidate see 45 FR 82480 and 47 FR 58454) for possible listing occur within the resource area these include:

| Species | Status |
|---|---|
| bald eagle (Haliaeetus leucocephalus) | endangered |
| Utah cutthroat trout (Salmo clarki utah) | candidate |
| least chub (Iotechthys phlegethontis) | " |
| Swainsons hawk (Buteo swainsoni) | " |
| ferruginous hawk (Buteo regalis) | " |
| Scleocactus pubispinus (Great Basin fishhook cactus) | " |
| Penstemon nanus (low beardtongue) | " |
| Eriogonum eremicum (limeston wild buckwheat) | " |
| Eriogomun natun (terrace wild buckwheat) | " |
| Astragalus callithrix (calloway milkvetch) | " |
| Cryptantha compacta (compact catseye) | " |
| Eriogonum ammnophilum (sand-loving wild buckwheat) | " |
| Sphaeralcea caespitosa (Jones globe-mallow) | " |

We are prepared to assist you whenever you have questions which we may be able to answer. If we can be of further assistance, please advise us.

The Fish and Wildlife Service representative who will provide you with technical assistance is Larry England of this office FTS 588-4430 or (801) 524-4430.

Fred L. Bolwahnn
Field Supervisor

# APPENDIX 7

U.S. FISH & WILDLIFE SERVICE
ENDANGERED SPECIES OFFICE
2078 Administration Building
1745 West 1700 South
Salt Lake City, Utah 84104

January 6, 1986

MEMORANDUM

TO: Area Manager, House Range Resource Area, Bureau of Land Management, Fillmore, Utah

FROM: Field Supervisor, Endangered Species Office, U.S. Fish and Wildlife Service, Salt Lake City, Utah

SUBJECT: Endangered Species List for House Range Resource Area

In response to your memorandum of November 18, 1985, concerning an updated species list for your Resource Management Plan, we are providing you the following list of species that may be presented in the concerned area:

| Listed | | Status |
|---|---|---|
| Peregrine falcon | Falco *peregrinus* | Endangered |
| Bald eagle | *Haliaeetus leucocephalus* | Endangered |

We would like to bring to your attention species which are candidates for official listing as threatened or endangered (see 49 FR 21664, 50 FR 35958, 50 FR 39526). While these species have no legal protection under the Endangered Species Act, we ask that you try to avoid them and consider them in your environmental planning if they are found in the area covered by your resource management plan. Candidate species which may occur in the area of your project are as follows:

| Candidate | | Category |
|---|---|---|
| Swasey spring pocket-gopher | *Thomomys umbrinus servieri* | 2 |
| Ferruginous hawk | *Buteo regalis* | 2 |
| Swainson's hawk | *Buteo swainsoni* | 2 |
| Bonneville cutthroat trout | *Salmo clarki utah* | 2 |
| Western snowy plover | *Charadrius alexandrinus nivosus* | 2 |
| Long-billed curlew | *Numeniusuamericanus* | 2 |
| White-faced ibis | *Plegadis chihi* | 2 |
| Currant milk-vetch | *Astragalus uncialis* | 2 |
| Compact catseye | *Cryptantha compacts* | 1 |
| Giant 4-wing saltbush | *Atriplex canescens gigantea* | 2 |
| Deep Creek Mt. stickseed | *Hackelia ibapensis* | 2 |

| | | |
|---|---|---|
| Tidestrom beard tongue | *Penstemon tidestromii* | 2 |
| No common name | *Frasera gypsicola* | 1 |
| Jones globe mallow | *Wphaeralcea caespitosa* | 2 |

The Federal agency should review their proposed action and determine if the action would affect any listed species. If the determination is "may affect" for listed species you must request in writing formal consultation from the Field Supervisor, U.S. Fish and Wildlife Service (FWS) at the address given above. At this time you should provide this office a copy of the biological assessment and any other relevant information that assisted you in reaching your conclusion.

The FWS can enter into formal Section 7 consultation only with another Federal agency or its designee. State, county, or any other governmental or private organizations can participate in the consultation process, help prepare information such as the biological assessment, participate in meetings, etc.

Your attention is also directed to Section 7(d) of the Endangered Species Act, as amended, which underscores the requirement that the Federal agency or the applicant shall not make any irreversible or irretrievable commitment of resources during the consultation period which, in effect, would deny the formulation or implementation of reasonable and prudent alteratives regarding their actions on any endangered or threatened species.

We are prepared to assist you whenever you have questions which we may be able to answer. If we can be of further assistance, please advise us. The FWS representative who will provide you technical assistance is Larry England; FTS 588-4430; comm. 524-4430.

John L. England

Robert G. Russink

bcc: AFA/SE-Wathen
ES/SLC
Official file
Reading file

## TOPAZ UNIT (WEST DESERT)

## APPENDIX 8 PROPOSED LIVESTOCK/BIG GAME FORAGE USE

| | LIVESTOCK | | | | | CURRENT ESTIMATED DEMAND FOR BIG GAME AND WILD HORSES (AUMs) | | | | | ESTIMATED FORAGE CAPACITY (AUMs) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | PERIOD OF USE | | | | Season's: S - Summer, W - Winter, YL - Yearlong | | | | | | | | | | |
| ALLOTMENT | KIND | CURRENT | PROPOSED | ACTIVE PREFERENCE (AUMs) | AVERAGE ACTUAL USE (AUMs) | MULE DEER | BIGHORN SHEEP | ANTELOPE | WILD HORSES | TOTAL | COMPETITIVE FORAGE AVAILABLE | ADDITIONAL NON-COMP. BIG GAME FORAGE | TOTAL | [1]INITIAL INDICATED LIVESTOCK FORAGE CAPACITY | MANAGEMENT CATEGORY (M.I.C.) | [3]PRIORITY FOR AMP DEVELOPMENT |
| *Antelope* | Cattle | 5/1 - 9/30 | Same | **99** | 98 | 140W | - | 38YL | 276YL | 454 | 3,277 | 138 | 3,415 | **2,961** | M | |
| | Sheep | 11/1 - 4/30 | Same | **3,956** | 987 | | | | | | | | | | | |
| *Bitner Knoll* | Sheep | 11/16 - 4/30 | Same | **1,995** | 1,925 | 35YL | - | 13YL | - | 48 | 1,754 | 0 | 1,754 | **1,706** | M | |
| Boyd Station | Cattle | 12/1 - 5/31 | TBD | **827** | 304 | 9YL | - | 26YL | - | 35 | 747 | 0 | 747 | **827** | M | |
| Callao | Cattle | 11/1 - 6/15 | TBD | **703** | 703 | - | - | 19YL | - | 19 | 660 | 0 | 660 | **703** | M | |
| Callao Bench | Cattle | 11/1 - 5/31 | Same | **747** | 747 | 116W | - | 19YL | - | 135 | 706 | 137 | 843 | **747** | I | 16 |
| Chalk Knolls | Cattle | 3/15 - 9/30 | Same | **1,213** | 834 | - | - | 38YL | - | 38 | 1,182 | 0 | 1,182 | **1,213** | M | |
| Cherry Creek | Cattle | 3/1 - 2/28 | TBD | **1,500** | 1,378 | - | - | 38YL | - | 38 | 1,856 | 0 | 1,856 | **1,500** | M | 22 |
| Cowboy Pass | Sheep | 11/1 - 4/30 | Same | **3,108** | 1,286 | - | - | 38YL | 180YL | 218 | 3,160 | 0 | 3,160 | **3,108** | M | 29 |
| Coyote Knolls | Sheep | 11/1 - 4/30 | Same | **2,331** | 2,034 | - | - | 38YL | 48YL | 86 | 2,099 | 30 | 2,129 | **2,331** | M | |
| Crater | Sheep | 11/1 - 4/30 | Same | **3,026** | 2,449 | - | - | 38YL | - | 38 | 2,986 | 0 | 2,986 | **3,026** | M | |
| *Death Canyon* | Cattle | 10/25 - 5/15 | Same | **1,110** | 1,070 | 56W | - | 52YL | - | 152 | 5,605 | 0 | 5,605 | **5,453** | M | |
| | Sheep | 11/11 - 5/10 | Same | **5,028** | 4,858 | 44YL | - | | | | | | | | | |
| Desert Mtn. | Sheep | 11/10 - 5/9 | Same | **3,544** | 1,572 | 112W<br>35YL | - | 52YL | - | 199 | 3,468 | 32 | 3,500 | **3,544** | M | |
| Devils Gate | Sheep | 11/1 - 4/30 | Same | **306** | 300 | - | - | 13YL | - | 13 | 327 | 0 | 327 | **306** | M | |
| East Fish Sp. | Cattle | 4/15 - 11/30 | TBD | **1,107** | 658 | 35YL | - | 26YL | - | 61 | 1,121 | 0 | 1,121 | **1,107** | M | |
| East Topaz | Sheep | 12/11 - 3/31 | Same | **2,348** | 1,340 | 42YL | - | 19YL | - | 61 | 2,369 | 72 | 2,441 | **2,348** | M | 28 |
| Flint | Sheep | 11/1 - 4/15 | Same | **1,467** | 1,364 | - | - | 13YL | - | 13 | 1,419 | 8 | 1,427 | **1,467** | M | |
| Freighter | Sheep | 11/1 - 4/30 | Same | **954** | 958 | 11W | - | 13YL | - | 24 | 989 | 34 | 1,023 | **954** | M | |
| Gandy | Cattle | 4/1 - 12/31 | TBD | **3,432** | 1,122 | - | - | 38YL | 120YL | 158 | 3,480 | 17 | 3,497 | **3,432** | I | 11 |
| Henry Creek | Cattle | 4/1 - 6/30 | Same | **171** | 24 | - | - | 6YL | - | 6 | 205 | 0 | 205 | **171** | M | |
| Kane Spring | Sheep | 4/1 - 4/17 | Same | **303** | 243 | - | - | 6YL | - | 6 | 287 | 0 | 287 | **303** | M | |
| Knoll Springs | Cattle | 5/1 - 10/31 | Same | **249** | 249 | - | - | 6YL | - | 6 | 249 | 0 | 249 | **249** | M | |
| *Lady Laird* | Sheep | 11/1 - 4/30 | Same | **4,830** | 2,415 | 56W | - | 38YL | - | 94 | 4,158 | 0 | 4,158 | **4,064** | M | |

## TOPAZ UNIT (WEST DESERT)

## APPENDIX 8 PROPOSED LIVESTOCK/BIG GAME FORAGE USE

| | LIVESTOCK | | | | | CURRENT ESTIMATED DEMAND FOR BIG GAME AND WILD HORSES (AUMs) | | | | | ESTIMATED FORAGE CAPACITY (AUMs) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | PERIOD OF USE | | | | | Season's: S - Summer, W - Winter, YL - Yearlong | | | | | | | | | |
| ALLOTMENT | KIND | CURRENT | PROPOSED | ACTIVE PREFERENCE (AUMs) | AVERAGE ACTUAL USE (AUMs) | MULE DEER | BIGHORN SHEEP | ANTELOPE | WILD HORSES | TOTAL | COMPETITIVE FORAGE AVAILABLE | ADDITIONAL NON-COMP. BIG GAME FORAGE | TOTAL | [1] INITIAL INDICATED LIVESTOCK FORAGE CAPACITY | MANAGEMENT CATEGORY (M.I.C.) | [3] PRIORITY FOR AMP DEVELOPMENT |
| *Little Drum* | Sheep | 11/1 - 4/30 | Same | **4,929** | 1,730 | 45W | - | 38YL | - | 83 | 4,419 | 0 | 4,419 | **4,336** | M | |
| [4]Marble Wash | Sheep | 11/1 - 4/30 | Same | **1,290** | 1,206 | - | - | 26YL | - | 26 | 1,206 | 0 | 1,206 | **1,290** | M | |
| Meadow Creek | Cattle | 5/1 - 5/15 | Same | **58** | 58 | 56W | - | 45YL | - | 101 | 3,665 | 52 | 3,717 | **3,454** | M | |
| | Sheep | 11/1 - 5/10 | Same | **3,396** | 3,239 | | | | | | | | | | | |
| Mountain | Cattle | 7/16 - 10/16 | Same | **352** | 352 | 2 41S<br>56W | 1W | - | - | 298 | 352 | 411 | 763 | **352** | I | 14 |
| Partoun | Cattle | 3/1 - 12/31 | TBD | **2,185** | 732 | 169W | 1W | 64YL | - | 355 | 4,260 | 455 | 4,715 | **4,379** | M | 13 |
| | Sheep | 11/2 - 4/26 | Same | **2,194** | 1,820 | 1 21S | | | | | | | | | | |
| *Riverbed* | Sheep | 11/1 - 4/15 | Same | **4,906** | 3,122 | 56W<br>24S | - | 77YL | - | 157 | 4,239 | 327 | 4,566 | **4,239** | M | |
| *Sand Pass* | Sheep | 11/1 - 4/30 | Same | **2,000** | 1,141 | 22W | - | 6YL | - | 28 | 1,481 | 79 | 1,560 | **1,481** | M | 25 |
| Sheep | Cattle | 11/1 - 4/15 | TBD | **355** | 203 | - | - | 13YL | - | 13 | 956 | 0 | 956 | **622** | I | 23 |
| | Sheep | 4/1 - 4/30 | Same | **267** | 200 | | | | | | | | | | | |
| Smelter Mtn. | Cattle | 1/1 - 9/30 | TBD | **719** | 719 | - | - | 19YL | - | 19 | 795 | 0 | 795 | **719** | I | 21 |
| Smith Creek | Cattle | 11/1 - 4/30 | Same | **138** | 76 | - | - | - | - | 0 | 161 | 0 | 161 | **138** | M | |
| Spor Mtn. | Sheep | 11/1 - 4/1 | Same | **2,750** | 1,273 | 71YL | - | 26YL | - | 97 | 3,256 | 78 | 3,334 | **2,750** | M | |
| Sugarville | Cattle | 3/16 - 10/31 | TBD | **2,959** | 2,090 | - | - | 13YL | - | 13 | 3,044 | 0 | 3,044 | **2,959** | M | 19 |
| *Swasey Knoll* | Sheep | 11/1 - 4/30 | Same | **4,350** | 2,649 | 28W | - | 51YL | - | 79 | 3,412 | 0 | 3,412 | **3,333** | M | |
| *Table Mtn.* | Sheep | 11/1 - 4/30 | Same | **4,048** | 3,153 | 56W | - | 51YL | - | 107 | 3,337 | 0 | 3,337 | **3,230** | M | |
| Tatow | Cattle | 5/1 - 9/30 | Same | **220** | 220 | 540W | - | 32YL | 864YL | 1,436 | 5,317 | 166 | 5,483 | **4,131** | I | 8 |
| | Sheep | 11/1 - 4/30 | Same | **3,911** | 1,946 | | | | | | | | | | | |
| Thousand Peaks | Cattle | 10/29 - 6/9 | TBD | **8,765** | 6,160 | 796YL | 44YL | 409YL | 1,320YL | 2,569 | 21,873 | 844 | 22,717 | **18,511** | I | 7 |
| | Sheep | 11/2 - 5/8 | Same | **9,746** | 6,634 | | | | | | | | | | | |
| Topaz | Cattle | 12/1 - 4/30 | Same | **245** | 61 | - | - | - | - | 0 | 245 | 0 | 245 | **245** | M | |
| Tule Spring | Sheep | 11/1 - 4/30 | Same | **1,196** | 762 | - | - | 13YL | - | 13 | 1,084 | 0 | 1,084 | **1,196** | M | |
| Tule Valley | Cattle | 5/16 - 10/15 | Same | **156** | 120 | - | - | - | 96YL | 96 | 351 | 0 | 351 | **156** | M | |
| [4]Warm Creek | Sheep | 11/1 - 4/30 | Same | **522** | 528 | - | - | 19YL | - | 19 | 522 | 0 | 522 | **522** | M | |
| *Wild Horse* | Sheep | 12/1 - 4/30 | Same | **3,577** | 1,927 | 22W<br>25S | - | 51YL | - | 98 | 2,880 | 109 | 2,989 | **2,880** | M | |

## TINTIC UNIT (EASTERN FOOTHILLS)

## APPENDIX 8 PROPOSED LIVESTOCK/BIG GAME FORAGE USE

| | LIVESTOCK | | | | | CURRENT ESTIMATED DEMAND FOR BIG GAME AND WILD HORSES (AUMs) | | | | ESTIMATED FORAGE CAPACITY (AUMs) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | PERIOD OF USE | | | | Season's: S - Summer, W - Winter, YL - Yearlong | | | | | | | | | | |
| ALLOTMENT | KIND | CURRENT | PROPOSED | ACTIVE PREFERENCE (AUMs) | AVERAGE ACTUAL USE (AUMs) | MULE DEER | ELK | ANTELOPE | TOTAL | COMPETITIVE FORAGE AVAILABLE | ADDITIONAL NON-COMP. BIG GAME FORAGE | TOTAL | [1] INITIAL INDICATED LIVESTOCK FORAGE CAPACITY | [2] POTENTIAL ADDITIONAL FORAGE THRU VEG. TREATMENT | MANAGEMENT CATEGORY (M.I.C.) | [3] PRIORITY FOR AMP DEVELOPMENT |
| *Beryllium* | Cattle | 5/1 - 10/15 | Same | **666** | 666 | - | - | 6YL | 6 | 539 | 0 | 539 | **533** | | I | 27 |
| *Big Hollow* | Cattle | 3/15 - 6/30 | Same | **216** | 0 | 35YL | - | - | 35 | 35 | 75 | 110 | **35** | 80 | I | |
| Blue Spring | Cattle | 4/1 - 5/31 | Same | **180** | 81 | 35YL | 41YL | - | 76 | 375 | 82 | 457 | **180** | | M | |
| Boulter | Sheep | 5/1 - 6/10 | Same | **723** | 497 | 176YL | - | - | 176 | 947 | 284 | 1,231 | **723** | 240 | I | 2 |
| Broad Canyon | Cattle | 11/1 - 12/31 | Same | **20** | 20 | 35YL | - | - | 35 | 29 | 68 | 97 | **20** | | I | |
| Cals Valley | Cattle | 4/1 - 5/31 | Same | **72** | 18 | 21YL | - | - | 21 | 101 | 26 | 127 | **72** | | M | |
| Cedar Springs | Cattle | 7/1 - 10/28 | Same | **24** | 24 | 44YL | - | - | 44 | 24 | 16 | 40 | **24** | | I | |
| Chicken Creek | Cattle | 4/1 - 5/31 | Same | **48** | 48 | - | 18YL | - | 18 | 48 | 7 | 55 | **48** | | M | |
| Chriss Creek | Cattle | 6/1 - 10/28 | Same | **78** | 78 | 18YL | - | - | 18 | 86 | 47 | 133 | **78** | 110 | I | |
| Cove | Cattle | 11/1 - 5/15 | Same | **238** | 159 | 44YL | - | - | 44 | 228 | 50 | 278 | **238** | | I | |
| Cutler | Cattle | 10/16 - 12/15 | Same | **32** | 26 | 10YL | - | - | 10 | 10 | 6 | 16 | **32** | | I | |
| Deer Foot | Cattle | 1/1 - 3/31 | Same | **54** | 32 | 44YL | - | - | 44 | 50 | 54 | 104 | **54** | 100 | I | |
| Dust Bowl | Catle | 3/15 - 5/31 | Same | **916** | 701 | 97YL | 58YL | - | 155 | 1,651 | 300 | 1,951 | **916** | 640 | I | 17 |
| *Ferner Dog Valley* | Cattle | 6/1 - 9/25 | Same | **1,218** | 1,148 | 101W<br>157S | 100YL | - | 358 | 970 | 817 | 1,787 | **970** | 900 | I | 4 |
| Finlinson 21A | Cattle | 5/1 - 6/30 | Same | **60** | 60 | 26YL | - | - | 26 | 65 | 65 | 130 | **60** | | I | |
| *Fook Creek 1* | Cattle | 5/16 - 12/15 | Same | **72** | 72 | 10YL | - | - | 10 | 49 | 0 | 49 | **39** | | C | |
| Fook Creek 2 | Cattle | 5/16 - 8/15 | Same | **16** | 6 | 10YL | - | - | 10 | 6 | 0 | 6 | **16** | | C | |
| Garrett | Cattle | 11/1 - 4/30 | Same | **63** | 21 | 10YL | - | - | 10 | 35 | 34 | 69 | **63** | | C | |
| *Gilson* | Sheep | 11/1 - 4/30 | Same | **1,287** | 788 | 121W<br>175S | - | 10YL | 306 | 986 | 597 | 1,583 | **986** | 320 | I | |
| *Jakes Canyon* | Cattle | 3/16 - 5/31 | Same | **113** | 68 | 35YL | - | - | 35 | 38 | 37 | 75 | **38** | | I | |
| Jenny Lind | Cattle | 5/21 - 10/5 | Same | **108** | 108 | 35YL | - | - | 35 | 116 | 61 | 177 | **108** | 137 | I | |
| *Juab* | Cattle | 10/1 - 12/1 | Same | **112** | 0 | 10YL | - | - | 10 | 82 | 12 | 94 | **82** | 100 | I | 17 |
| *Kimball Creek* | Cattle | 6/1 - 9/21 | Same | **3,081** | 2,431 | 370YL | 128YL | - | 498 | 1,727 | 711 | 2,438 | **1,727** | 1,100 | I | 16 |

## TINTIC UNIT (EASTERN FOOTHILLS)

## APPENDIX 8 PROPOSED LIVESTOCK/BIG GAME FORAGE USE

| | LIVESTOCK | | | | | CURRENT ESTIMATED DEMAND FOR BIG GAME AND WILD HORSES (AUMs) | | | | ESTIMATED FORAGE CAPACITY (AUMs) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | PERIOD OF USE | | | | Season's: S - Summer, W - Winter, YL - Yearlong | | | | | | | | | | |
| ALLOTMENT | KIND | CURRENT | PROPOSED | ACTIVE PREFERENCE (AUMs) | AVERAGE ACTUAL USE (AUMs) | MULE DEER | ELK | ANTELOPE | TOTAL | COMPETITIVE FORAGE AVAILABLE | ADDITIONAL NON-COMP BIG GAME FORAGE | TOTAL | [1] INITIAL INDICATED LIVESTOCK FORAGE CAPACITY | [2] POTENTIAL ADDITIONAL FORAGE THRU VEG. TREATMENT | MANAGEMENT CATEGORY (M.I.C.) | [3] PRIORITY FOR AMP DEVELOPMENT |
| *Klondike* | Cattle | 3/15- 4/30 | Same | **60** | 35 | 44YL | - | - | 44 | 14 | 37 | 51 | **14** | 49 | I | |
| Levan | Cattle | 4/23 - 5/22 | Same | **269** | 30 | 38W | 41YL | - | 79 | 552 | 127 | 679 | **269** | | I | 17 |
| Lunt-Latimer | Cattle | 4/1 - 6/15 | Same | **38** | 10 | - | - | - | 0 | 46 | 27 | 73 | **38** | | M | |
| *Lynndyl* | Cattle | 5/1 - 10/1 | Same | **1,676** | 1,676 | - | - | 6YL | 6 | 575 | 23 | 598 | **575** | | I | |
| *Maple Peak* | Cattle | 5/21 - 10/5 | Same | **5,137** | 4,973 | 2,078YL | - | - | 2,078 | 4,091 | 2,318 | 6,409 | **4,091** | 3,200 | I | 1 |
| McIntyre | Cattle | 11/1 - 3/31 | Same | **1,125** | 1,013 | 200W | - | 6YL | 206 | 1,771 | 496 | 2,267 | **1,125** | 1,600 | I | 3 |
| *Middle Fork* | Cattle | 4/1 - 12/31 | Same | **546** | 153 | 44W<br>54S | 47YL | - | 145 | 259 | 137 | 396 | **251** | 480 | I | 30 |
| Mills | Cattle | 3/1 - 4/15 | Same | **200** | 200 | 22W | 47YL | - | 69 | 336 | 84 | 420 | **200** | | I | 17 |
| *Nelson* | Cattle | 5/1 - 9/21 | Same | **521** | 521 | - | - | 13YL | 13 | 322 | 0 | 322 | **309** | | I | |
| Nephi Bench | Cattle | 9/1 - 10/31 | Same | **122** | 37 | 16W | - | - | 16 | 118 | 47 | 165 | **122** | | I | |
| *North Scipio* | Cattle | 3/1 - 2/28 | Same | **762** | 333 | 72YL | - | - | 72 | 539 | 169 | 708 | **539** | 300 | I | 31 |
| *Oak City* | Cattle | 5/16 - 8/31 | Same | **2,205** | 996 | 147W | - | - | 147 | 1,149 | 153 | 1,302 | **1,149** | | I | |
| *Okelberry* | Cattle | 5/10 - 9/30 | Same | **272** | 235 | | | | | | | | | | | |
| | Sheep | 5/1 - 6/30 | Same | **589** | 504 | 105YL | 103YL | - | 208 | 619 | 243 | 862 | **619** | 200 | I | 5 |
| *Paint Mine* | Cattle | 4/6 - 6/5 | TBD | **545** | 241 | 26S | - | - | 26 | 216 | 89 | 305 | **216** | | I | |
| Red Butte | Cattle | 4/1 - 6/30 | Same | **876** | 392 | 35YL | 53W | - | 88 | 1,295 | 78 | 1,373 | **876** | | M | |
| Riley Spring | Sheep | 5/1 - 5/30 | Same | **144** | 94 | 22W<br>24S | - | - | 46 | 179 | 91 | 270 | **144** | 200 | I | |
| [5]Rocky Ford | Cattle | 5/16 - 8/15 | Same | **792** | 969 | 35YL | - | - | 35 | 976 | 141 | 1,117 | **792** | 160 | I | 32 |
| Round Valley | Cattle | 12/16 - 3/31 | Same | **376** | 286 | 62YL | 25YL | - | 87 | 332 | 99 | 431 | **376** | | I | |
| *Sage Valley16* | Cattle | 12/1 - 5/31 | TBD | **948** | 433 | 28W<br>24S | 35YL | - | 87 | 525 | 145 | 760 | **525** | 500 | I | 9 |
| *Sage Valley17* | Cattle | 11/1 - 5/15 | Same | **2,376** | 1,057 | 28W<br>24S | 69YL | - | 121 | 1,376 | 153 | 1,529 | **1,376** | 400 | I | 10 |
| *Salt Creek* | Sheep | 5/1 - 6/15 | Same | **225** | 225 | 84W<br>145S | 69YL | - | 298 | 164 | 178 | 342 | **164** | | M | |
| *Sevier River* | Cattle | 3/15 - 11/30 | Same | **1,066** | 1,066 | 70YL | - | - | 70 | 601 | 270 | 871 | **601** | 300 | I | 15 |
| Shearing | Sheep | 4/6 - 4/30 | TBD | **1,431** | 795 | 89W | - | - | 89 | 2,020 | 974 | 2,994 | **1,431** | 2,400 | I | 12 |

## TINTIC UNIT (EASTERN FOOTHILLS)

## APPENDIX 8 PROPOSED LIVESTOCK/BIG GAME FORAGE USE

| | LIVESTOCK | | | | | CURRENT ESTIMATED DEMAND FOR BIG GAME AND WILD HORSES (AUMs) | | | | ESTIMATED FORAGE CAPACITY (AUMs) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | PERIOD OF USE | | | | Season's: S - Summer, W - Winter, YL - Yearlong | | | | | | | | | | |
| ALLOTMENT | KIND | CURRENT | PROPOSED | ACTIVE PREFERENCE (AUMs) | AVERAGE ACTUAL USE (AUMs) | MULE DEER | ELK | ANTELOPE | TOTAL | COMPETITIVE FORAGE AVAILABLE | ADDITIONAL NON-COMP. BIG GAME FORAGE | TOTAL | [1] INITIAL INDICATED LIVESTOCK FORAGE CAPACITY | [2] POTENTIAL ADDITIONAL FORAGE THRU VEG. TREATMENT | MANAGEMENT CATEGORY (M.I.C.) | [3] PRIORITY FOR AMP DEVELOPMENT |
| Sheeprock | Cattle | 5/21- 10/5 | Same | **1,567** | 1,510 | 1,148YL | - | - | 1,148 | 1,456 | 1,099 | 2,555 | **1,567** | 1,000 | I | 20 |
| *Snadge Hollow* | Cattle | 3/15 - 5/31 | Same | **77** | 76 | 44YL | - | - | 44 | 34 | 61 | 95 | **34** | 80 | I | |
| *Spring Canyon* | Cattle | 11/1 - 7/31 | Same | **156** | 114 | | | | | | | | | | | |
| | Sheep | 5/1 - 5/15 | Same | **482** | 115 | 123YL | 82YL | - | 205 | 277 | 210 | 487 | **277** | 300 | I | |
| *Stone* | Cattle | 11/1 - 4/30 | Same | **120** | 120 | 52YL | - | - | 52 | 61 | 54 | 115 | **61** | 140 | I | |
| Stone Quarry | Sheep | 5/1 - 5/31 | Same | **225** | 210 | 34W<br>30S | 41YL | - | 105 | 264 | 178 | 442 | **225** | 300 | I | |
| *Summitt* | Cattle | 3/16 - 5/15 | Same | **238** | 58 | 104YL | - | - | 104 | 138 | 160 | 298 | **138** | 60 | I | |
| [5]Tintic Pastures | Cattle | 4/1 - 10/31 | Same | **840** | 910 | 21YL | - | - | 21 | 773 | 0 | 773 | **840** | | M | |
| Twelve-B | Cattle | 5/1 - 5/31 | Same | **7** | 7 | - | - | - | 0 | 8 | 0 | 8 | **7** | | M | |
| *Valley Mtn.* | Cattle | 5/1 - 6/20 | Same | **100** | 100 | 21YL | - | - | 21 | 54 | 19 | 73 | **52** | | I | |
| *Washboard* | Cattle | 5/16 - 12/31 | Same | **860** | 204 | 35YL | 24W | - | 59 | 411 | 103 | 514 | **411** | 500 | I | 18 |
| West Mona | Cattle | 4/11 - 6/30 | TBD | **659** | 533 | 177YL | 58YL | - | 235 | 713 | 661 | 1,374 | **659** | 80 | I | 26 |
| *Yuba* | Cattle | 3/1 - 2/28 | Same | **773** | 272 | 21YL | 24W | - | 45 | 542 | 54 | 596 | **542** | 370 | I | 24 |
| TOTALS | | | | **147,390** | 98,594 | 9,964 | 1,063 | 1,581 | 15,558 | 139,962 | 15,016 | 155,068 | **130,100** | 17,066 | | |

NOTE: The allotments that are denoted in *italics* are the 38 target allotments that require monitoring and/or proposed allocation adjustments for livestock.

Footnotes:

[1] - The forage levels in this column are the same as those shown in the ACTIVE PREFERENCE column with the exception of the indicated reductions on the 38 allotments. These represent estimates only that will be refined through monitoring studies.

[2] - These estimates are for over 81,000 suitable treatment acres. Only approx. 65,000 acres is proposed for treatment, so the actual yields will be somewhat less than is shown here.

[3] - Only 32 priority allotments are prioritized for AMP development/implementation. All remaining allotments will be further prioritized in the Rangeland Program Summary (R.P.S.) with all remaining "I" allotments receiving priority.

[4] - These three allotments are managed by the Ely District, NV.

[5] - These two allotments have actual use levels that presently exceed active preference. Both allotments have had forage increases due to vegetation treatments and have been licensed on an additional temporary renewable basis.

TBD - To Be Determined through monitoring studies.

# APPENDIX 9

## Allotment Categorization

All allotments in the HRRA have been categorized in accordance with M I C criteria provided in WO Instruction Memo 82-292 (Final Grazing Management Policy) based on the HRRA range staff's evaluation of the allotments.

### Maintain (M) Category Criteria

- Present range condition is satisfactory and no significant areas within an allotment are receiving greater than 60 percent utilization on key forage species.

- Allotments have moderate or high resource production potential and are producing near their potential (or trend is moving in that direction).

- No serious resource-use conflicts/controversy exist.

- Opportunities may exist for positive economic return from public investments.

- Present management appears satisfactory.

Based on the above specific criteria, the HRRA range staff recommend the following 44 allotments be placed in the Maintain category:

| Allotment Number | Allotment Name | Acres Federal Range |
|---|---|---|
| 4301 | Antelope | 72,102 |
| 5013 | Bitner Knoll | 21,170 |
| 5746 | Blue Spring | 2,445 |
| 5031 | Boyd Station | 21,773 |
| 5029 | Callao | 20,794 |
| 5747 | Cals Valley | 2,244 |
| 4401 | Chalk Knolls | 45,527 |
| 4402 | Cherry Creek (AMP)[a] | 36,562 |
| 5709 | Chicken Creek | 495 |
| 3105 | Cowboy Pass (AMP)[a] | 41,059 |
| 4309 | Coyote Knoll | 34,934 |
| 4311 | Crater | 56,581 |
| 5005 | Death Canyon | 50,366 |
| 5003 | Desert Mountain | 36,810 |
| 4315 | Devils Gate | 4,159 |
| 5032 | East Fish Springs | 50,930 |
| 5012 | East Topaz (AMP)[a] | 29,126 |
| 5009 | Flint | 16,176 |
| 5002 | Freighter | 13,216 |
| 4321 | Henry Creek | 6,200 |
| 5010 | Kane Spring | 2,976 |
|  | Knoll Spring | 11,652 |
| 4325 | Lady Laird | 53,797 |
| 4326 | Little Drum | 66,914 |
| 4509 | Lunt-Latimer | 592 |
| 5004 | Meadow Creek | 46,475 |
|  | Marble Wash | 21,776 |
|  | Partoun[a] | 71,983 |
| 5761 | Red Butte | 7,291 |

# APPENDIX 9

| Allotment Number | Allotment Name | Acres Federal Range |
|---|---|---|
| 5008 | Riverbed | 52,175 |
| 5731 | Salt Creek | 3,323 |
| 4333 | Sand Pass (AMP)[a] | 32,222 |
| 4335 | Smith Creek | 15,219 |
| 5018 | Spor Mountain | 53,053 |
| 4409 | Sugarville[a] | 51,391 |
| 4337 | Swasey Knoll | 47,282 |
| 5007 | Table Mountain | 36,459 |
| 4523 | Tintic Pastures | 3,618 |
| 4410 | Topaz | 3,124 |
| 4340 | Tule Spring | 14,986 |
|  | Tule Valley | 14,500 |
|  | Warm Creek | 8,050 |
| 5017 | Wild Horse | 44,383 |
| 4522 | Twelve B | 200 |
| Total |  | 1,226,106 acres |

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[a] These six allotments show little potential for increase in AUMs through improved management or additional development. However, there is a definite possibility that existing AUMs could be lost unless some development is implemented. As the rangeland program is further refined and implemented, the categorization of these allotments could change, or at least some investments made, due to the potential for loss if further action is not taken.

## Improve (I) Category Criteria

- Present range condition is unsatisfactory.
- Allotments have moderate to high resource production potential and are producing at low to moderate levels.
- Serious resource-use conflicts/controversy exists.
- Opportunities exist for positive economic return from public investments.
- Present management practices are inadequate and/or nonproductive.
- There may be the potential of consolidating an allotment with other allotments for management purposes (i.e., vegetation treatment).

Based on the above criteria, the HRRA range staff recommend the following 54 allotments be placed in the Improve category:

| Allotment Number | Allotment Name | Acres Federal Range |
|---|---|---|
| 4400 | Berryllium | 8,367 |
| 5745 | Big Hollow | 3,978 |
| 4501 | Boulter | 6,613 |
| 4500 | Broad Canyon | 4,512 |
| 5773 | Callao Bench | 18,603 |

# APPENDIX 9

| Allotment Number | Allotment Name | Acres Federal Range |
|---|---|---|
| 5709 | Cedar Springs | 628 |
| 5711 | Chriss Creek | 1,144 |
| 5748 | Cove | 3,183 |
| 5749 | Cutler | 120 |
| 5750 | Deers Foot | 1,668 |
| 5752 | Dust Bowl (AMP) | 11,326 |
| 4502 | Ferner Dog Valley (AMP) | 16,597 |
| 4504 | Finlinson 21A | 1,351 |
| 4318 | Gandy (AMP) | 52,515 |
| 4506 | Gilson | 20,582 |
| 5754 | Jakes Canyon | 2,069 |
| 4507 | Jenny Lind | 1,321 |
| 5755 | Juab | 1,253 |
| 4508 | Kimball Creek (AMP) | 20,600 |
| 5756 | Klondike | 2,072 |
| 5720 | Levan | 3,390 |
| 4305 | Lynndyl | 11,154 |
| 4510 | Maple Peak | 59,520 |
| 4511 | McIntyre | 54,610 |
| 5011 | Mountain | 5,170 |
| 5724 | Middle Fork (AMP) | 3,178 |
|  | Mills | 4,353 |
| 4512 | Nelson | 8,288 |
| 4513 | Nephi Bench | 1,387 |
| 5760 | North Scipio (AMP) | 4,525 |
| 4406 | Oak City | 19,281 |
| 4514 | Okelberry (AMP) | 5,633 |
| 4515 | Paint Mine | 2,674 |
| 4517 | Riley Spring | 3,469 |
| 4516 | Rocky Ford (AMP) | 10,008 |
| 5764 | Round Valley (AMP) | 3,639 |
| 5703 | Sage Valley 16 (AMP) | 4,916 |
| 5730 | Sage Valley 17 (AMP) | 11,044 |
| 5765 | Sevier River | 5,331 |
| 4519 | Shearing | 32,629 |
| 4407 | Sheep | 25,114 |
| 4518 | Sheep Rock (AMP) | 20,787 |
| 4408 | Smelter Mountain | 60,057 |
| 5766 | Snadge Hollow | 3,399 |
| 5702 | Spring Canyon | 4,562 |
| 5768 | Stone | 2,303 |
| 5735 | Stone Quarry | 3,466 |
| 5768 | Summit | 3,752 |
| 4339 | Tatow | 56,839 |
| 5030 | Thousand Peaks | 332,022 |
| 5759 | Valley Mountain | 1,818 |
| 5741 | Washboard | 4,477 |
| 4521 | West Mona | 17,316 |
| 5744 | Yuba | 3,850 |
| Total |  | 971,602 acres |

## Custodial (C) Category Criteria

- Present range condition is not a factor.
- Allotments have low resource production potential and are producing near their potential.
- Resource-use conflicts/controversy may exist, but are limited or not considered significant.
- Opportunities for positive economic return on public investment do not exist or are constrained by technological, eonomic, or other land use factors. Opportunities for private investment may exist.
- Present management appears satisfactory or is the only logical practice under existing resource conditions.
- The public lands in an allotment may be designated for disposal or may be dedicated to some other land use (i.e., mineral development, ORV recreation).

Based on the above criteria, the HRRA range staff recommend the following three allotments to be placed in the Custodial category:

| Allotment Number | Allotment Name | Acres Federal Range |
|---|---|---|
| 4303 | Fool Creek 1 | 959 |
| 4404 | Fool Creek 2 | 120 |
| 4505 | Garrett | 780 |
| Total | | 1,859 acres |

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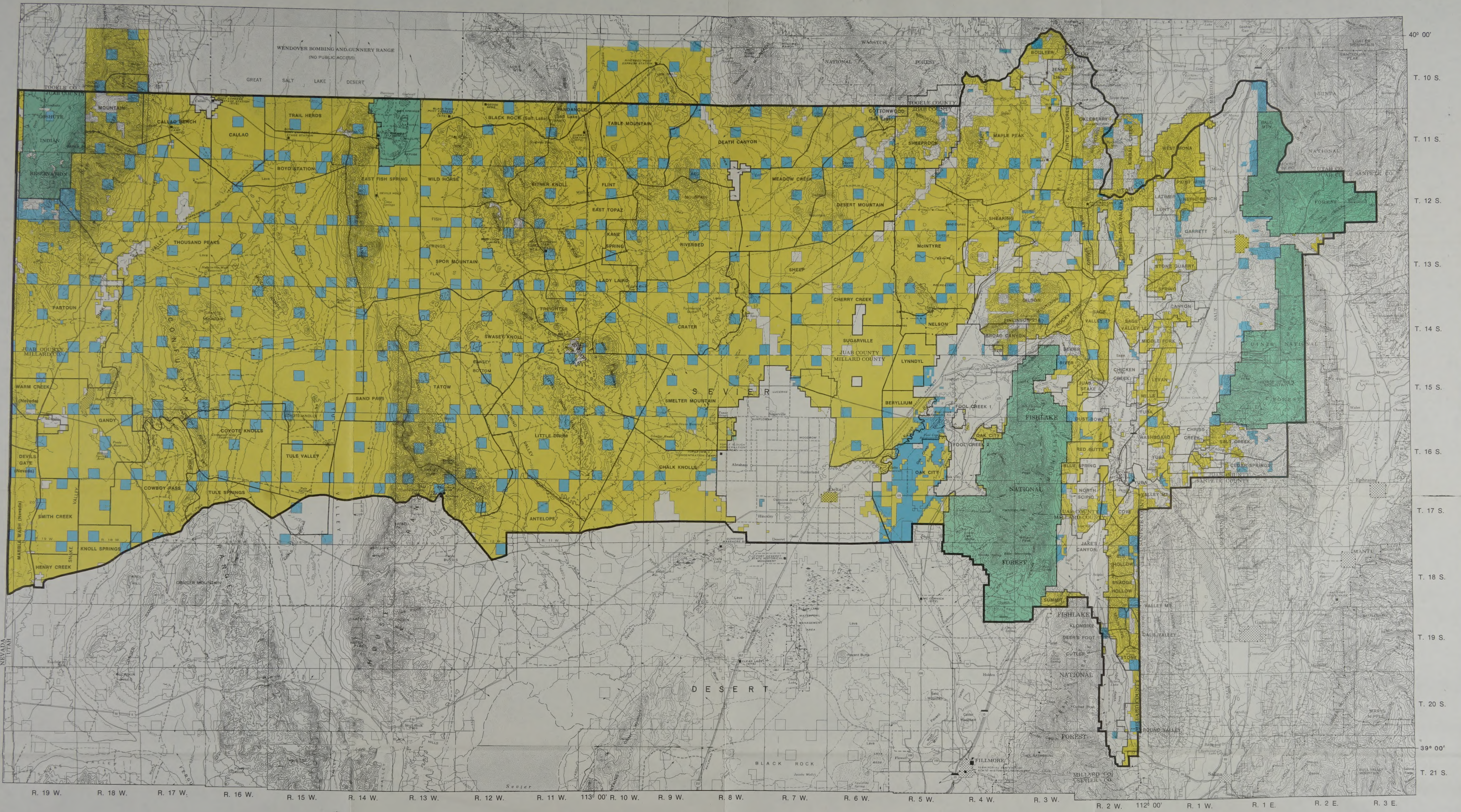

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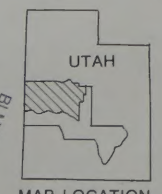

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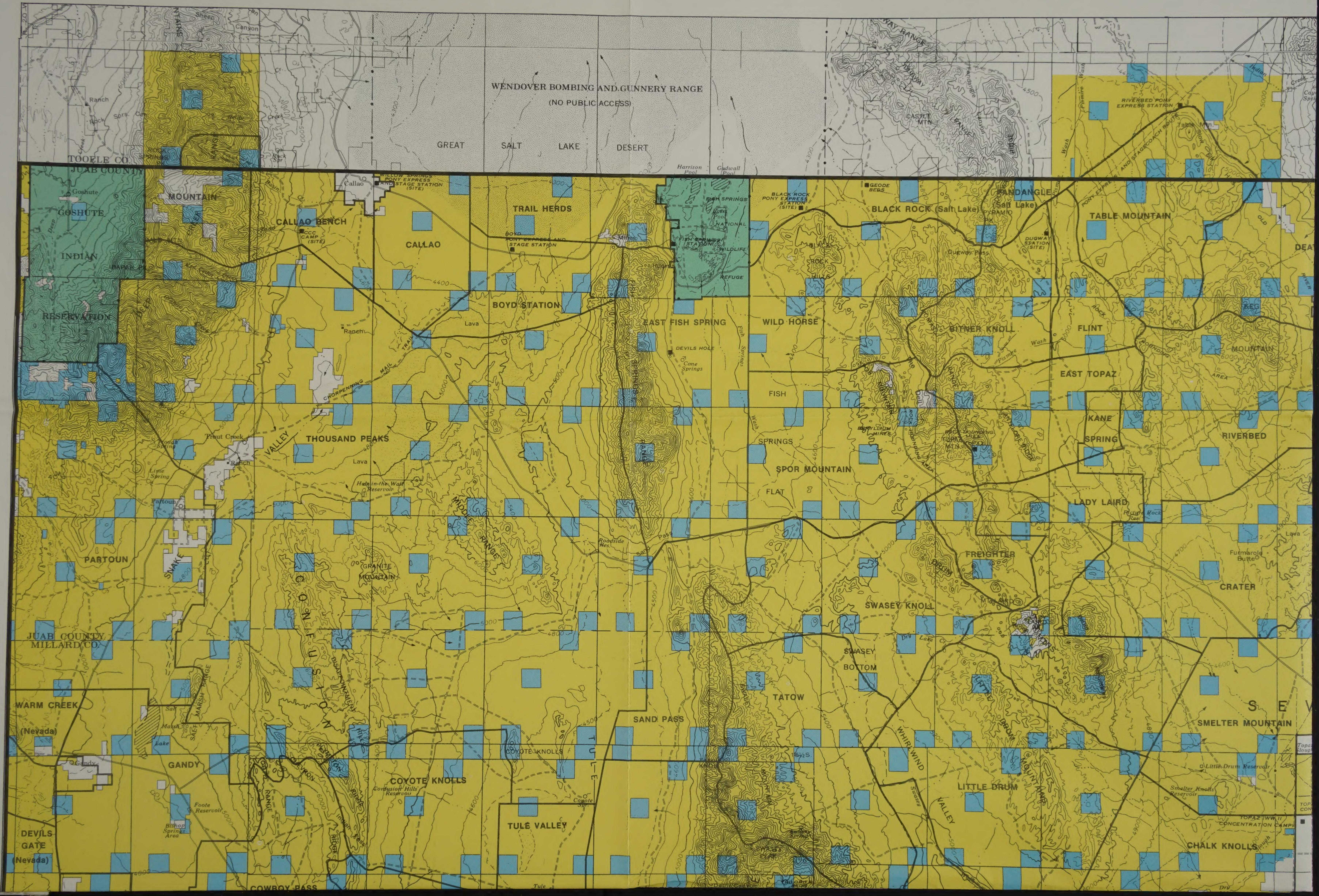
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Callao
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CALLAO BENCH
CCC CAMP (SITE)
CALLAO
TRAIL HERDS
BOYD PONY EXPRESS AND STAGE STATION
BOYD STATION
FISH SPRINGS NATIONAL WILDLIFE REFUGE
FISH SPRINGS STATION
EAST FISH SPRING
DEVILS HOLE
Cone Springs
Harrison Pool
Gudwall Pool
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GEODE BEDS
BLACK ROCK (Salt Lake)
FANDANGLE (Salt Lake)
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CASTLE MTN
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FISH SPRINGS FLAT
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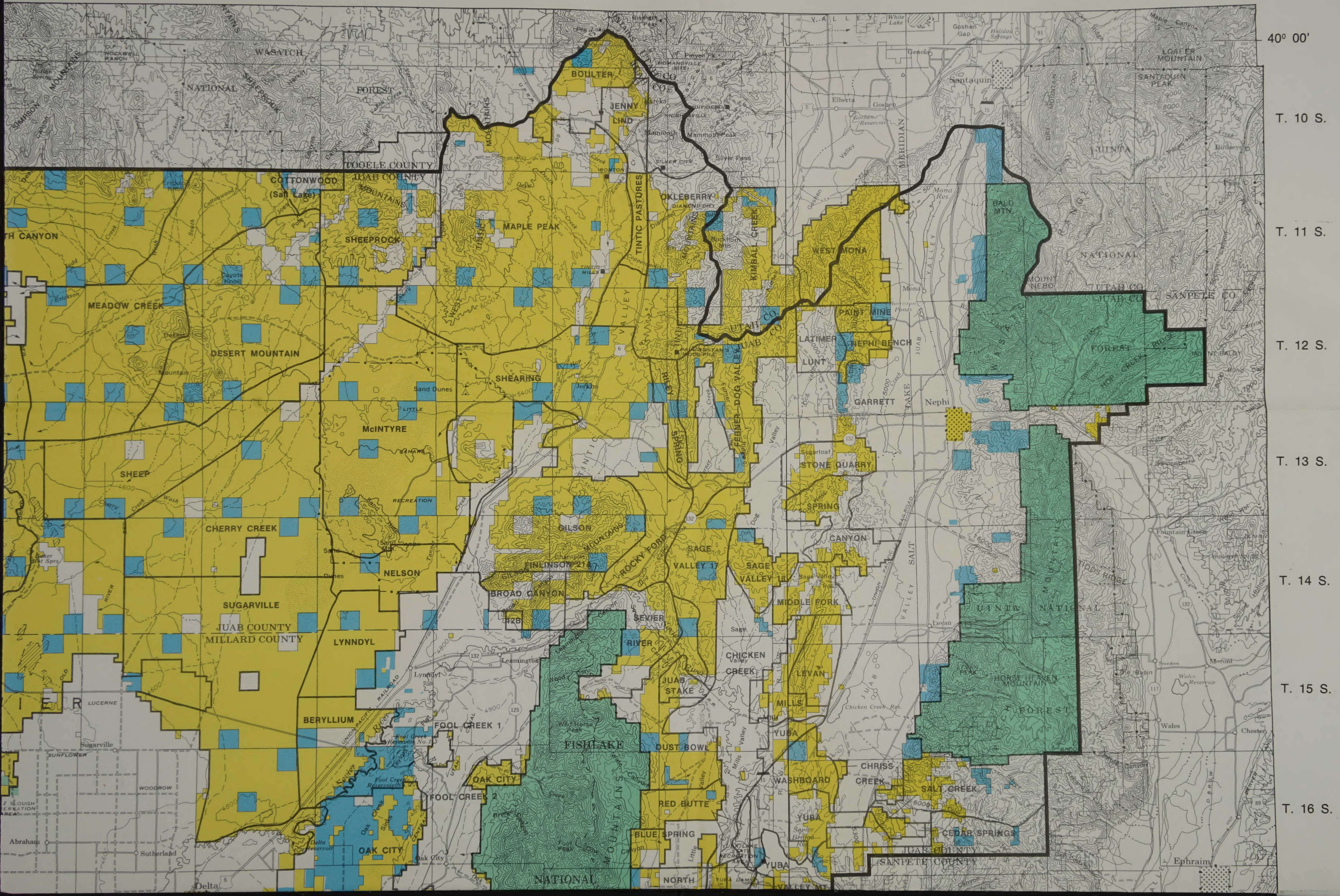
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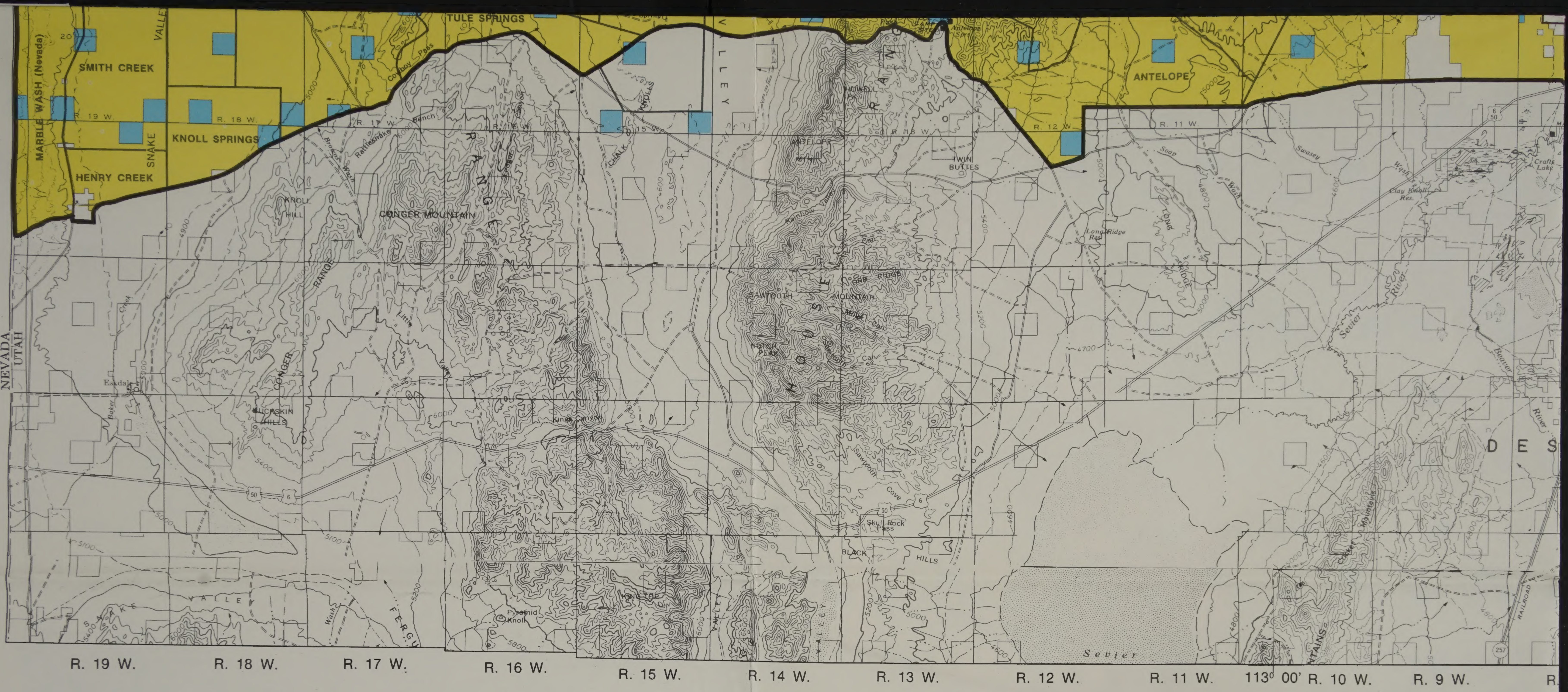

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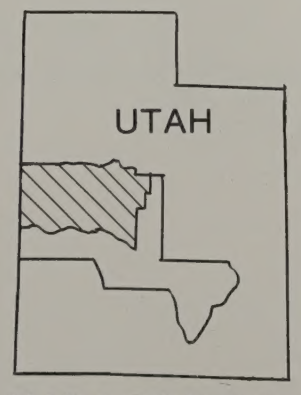

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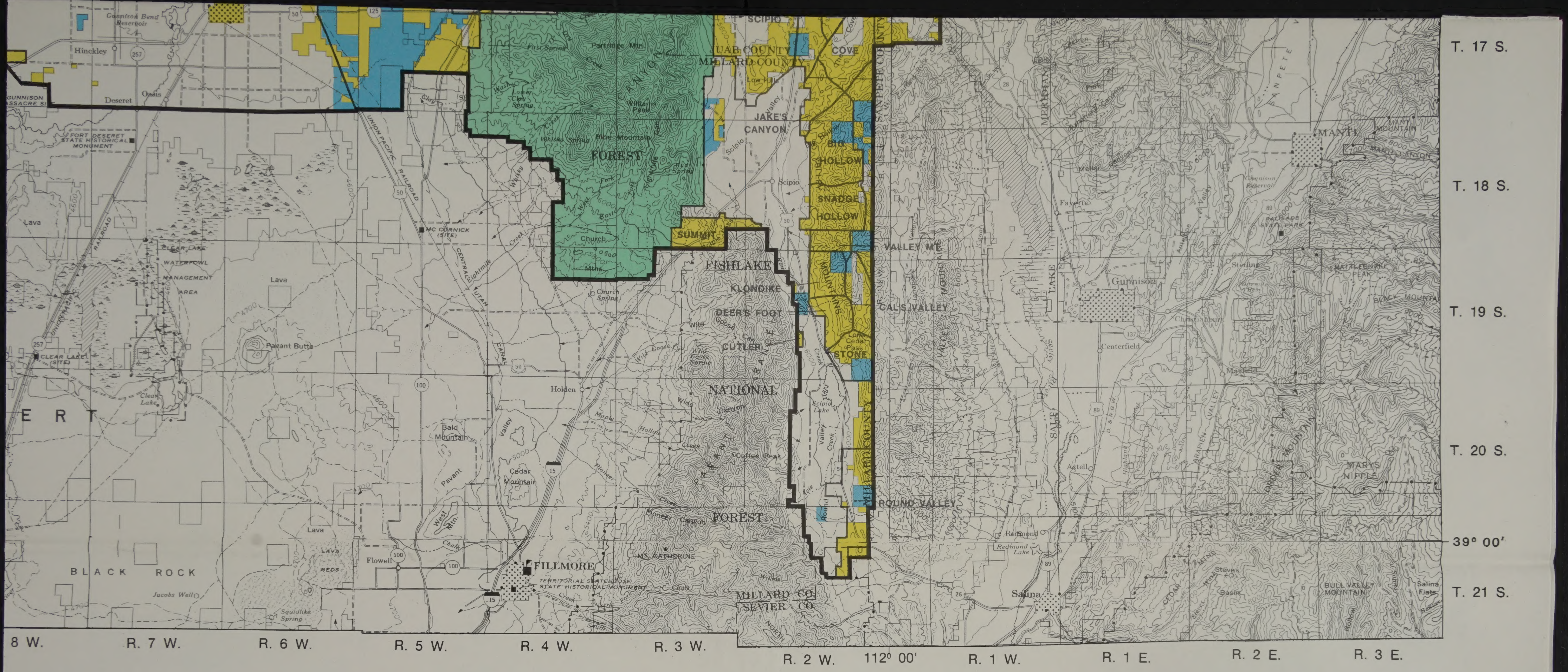

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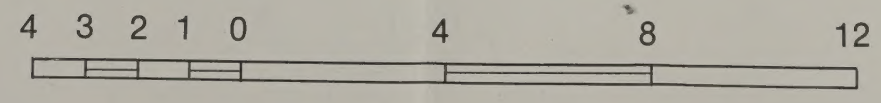

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